

*United States Court of Appeals
for the
District of Columbia Circuit*



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BRIEF FOR APPELLANT, H. H. HUNTLEY

IN THE

United States Court of Appeals
FOR THE DISTRICT OF COLUMBIA CIRCUIT

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United States Court of Appeals
for the District of Columbia Circuit

No. 23,421

FILED NOV 14 1969

Nathan J. Paulson
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H. H. HUNTLEY,

Appellant.

v.

FEDERAL COMMUNICATIONS COMMISSION,

Appellee,

COSMOPOLITAN ENTERPRISES, INC.,

Intervenor.

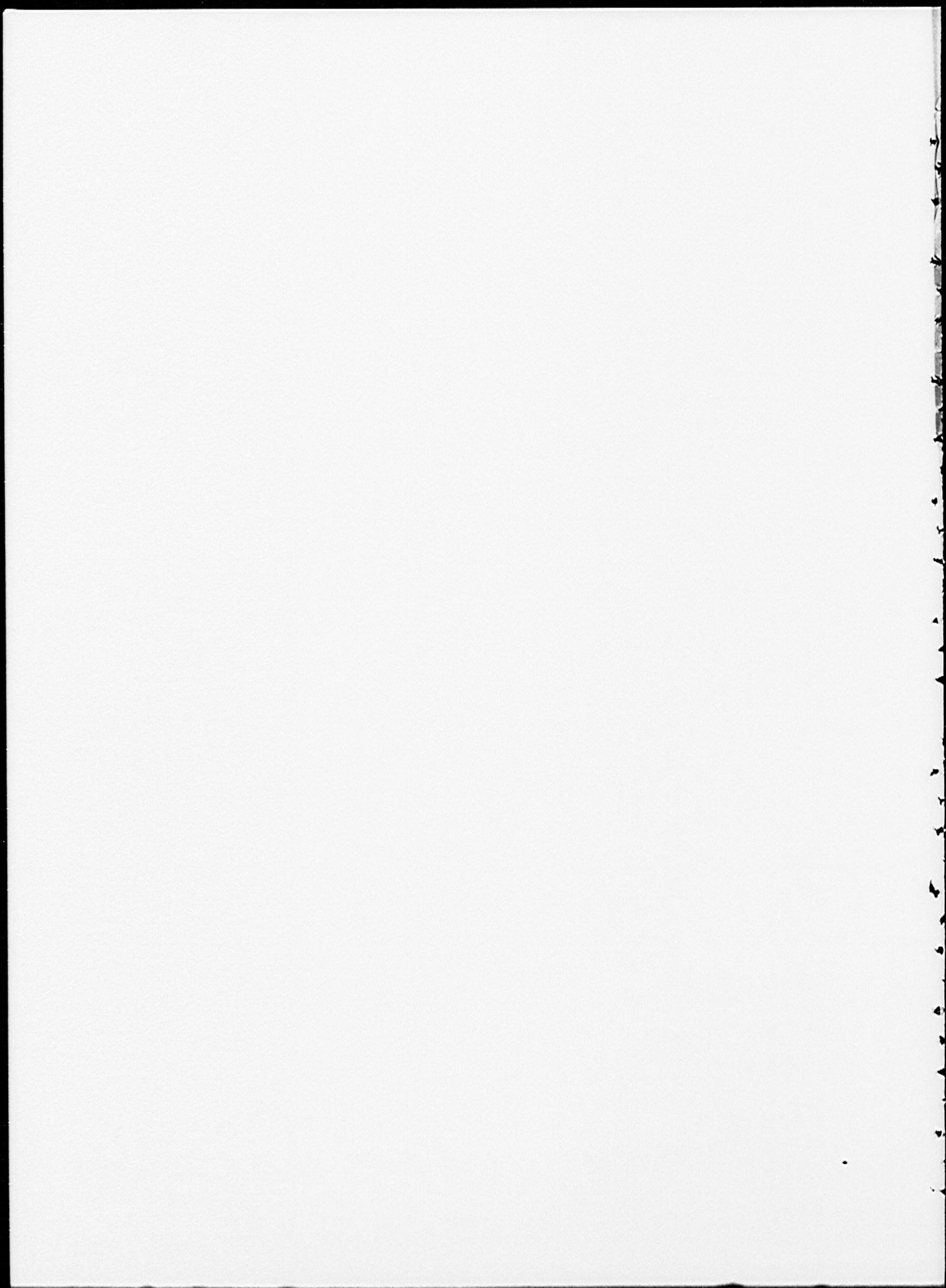
On Appeal from an Order of the
Federal Communications Commission

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IN THE
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No. 23,421*

H. H. HUNTLEY,

Appellant,

v.

FEDERAL COMMUNICATIONS COMMISSION,

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COSMOPOLITAN ENTERPRISES, INC.,

Intervenor.

On Appeal from an Order of the
Federal Communications Commission

BRIEF FOR APPELLANT, H. H. HUNTLEY

STATEMENT OF ISSUES PRESENTED

1. Whether the Federal Communications Commission's Order denying H. H. Huntley's Application for Review of the Decision of the Commission's Review Board contravenes statutory authority, constitutes an abuse of discretion, is arbitrary or capricious or is otherwise unlawful.

* This pending case was not previously before this Court under the same or similar title.

2. Whether the Review Board's action, on its own motion which, in effect, amends Cosmopolitan Enterprises, Inc.'s. application and varies that applicant's evidentiary presentation, without affording notice or the opportunity to be heard to H. H. Huntley, violates the statutory requirements and the Commission's own Rules governing the conduct of adjudicatory proceedings.
3. Whether the Review Board's action observes the due process procedural safeguards required by the Fifth Amendment to the Constitution.
4. Whether the procedure whereby the Review Board failed to disqualify Cosmopolitan Enterprises, Inc., after having found adversely as to an issue of that applicant's fundamental statutory qualifications, is contrary to statute or the Rules and Regulations of the Federal Communications Commission.
5. Whether the Review Board's determination under Section 307(b) of the Communications Act, as amended, which assigned primary decisional significance to the status of Edna, Texas, as a county seat, is arbitrary, capricious and without factual support and, as such, is contrary to the policy of the Federal Communications Commission.
6. Whether the Decision of the Review Board and the Order of the Commission in granting the application of Cosmopolitan Enterprises, Inc., and denying the application of H. H. Huntley, are in the public convenience, interest or necessity.

JURISDICTIONAL STATEMENT

This Court has jurisdiction of this Appeal under Section 402(b)(1) of the Communications Act of 1934, as amended, 47 U.S.C. §402(b)(1) and Rule 15 of the Federal Rules of Appellate Procedure, 28 U.S.C. (1968).

REFERENCES TO RULING:

Order of the Federal Communications Commission, FCC 69-798 (July 25, 1969); Decision of the Review Board, Cosmopolitan Enterprises, Inc., 15 FCC 2d 650 (1968); Initial Decision, FCC 67-D-41 (August 9, 1967)

STATEMENT OF THE CASE

This case involves two mutually exclusive applications filed before the Federal Communications Commission for construction permits to establish new standard broadcast (AM radio) stations in southeastern Texas. Each applicant proposes to operate on a frequency of 1130 kiloHertz with 10 kilowatts of power during daytime hours. H. H. Huntley seeks authority to construct a standard broadcast station at Yoakum, which is 35 miles from Edna, the site of Cosmopolitan Enterprises, Inc's. proposed station. Both applicants intend to utilize a directional antenna system in order to prevent destructive interference to Station KWKH, Shreveport, Louisiana. Each proposal would provide the first local broadcast service to its respective community. (Int. Dec., p. 1).

Huntley's proposed AM station in Yoakum will provide service to 357,101 persons residing in an area of 20,914 square miles. Cosmopolitan proposes to provide service to 334,702 persons residing in an area of 18,100 square miles. Each community lacks a local AM outlet but each now receives service from eight existing stations located in other communities. (Int. Dec., p. 4).

Yoakum has an official census population of 5,761 persons and is located on the boundary of DeWitt and Lavaca Counties. Approximately 70% of the city is in Lavaca County and the remaining 30% is in DeWitt County. Cuero, located 16 miles southwest of Yoakum, is the seat of DeWitt County, while Hallettsville is the seat of Lavaca County. Yoakum's population in 1950 was 5,321 persons. DeWitt County's population was 22,973 persons in 1950 as compared with 20,683 persons in 1960. Lavaca County's population was 22,159 persons in 1950 as compared with 20,174 persons in 1960. A single broadcast station is licensed to a community in DeWitt County (Station KCFH, Cuero). No station is licensed to any community in Lavaca County. (Rev. Bd. Dec., p. 6).

Yoakum is governed under a home rule charter. The city has a school, a municipal hospital, churches of various denominations and offices of four state agencies (District Office of the Texas Highway Department, State Health

Department, State Employment Agency and Soil Conservation Service). Yoakum also provides water, sewer and electrical facilities to its residents. The Chamber of Commerce and its associated organizations encourage and assist industry and business enterprises in locating in the area. There is one newspaper published three times a week in Yoakum. There are no AM, FM or TV stations in Yoakum or Lavaca County. Station KCFH-AM is located in Cuero. (Int. Dec., p. 3).

Yoakum is located in an area where grain, cotton, stock raising and large cattle feedlots are the principal agricultural activities. Yoakum has a labor force of 3,160 persons. Within the city there are several companies which tan leather and manufacture leather products. These manufacturers employ about 900 people. Yoakum also has 123 retail establishments, 17 wholesale trade establishments and food processing plants employing 510 persons. (Rev. Bd. Dec., p. 6).

The community of Edna, which has a population of 5,038 persons, is the Seat of Jackson County, which has a population of 14,040 persons. The Jackson County Courthouse, Chamber of Commerce, four state agencies and seven federal agencies are located in Edna. Edna is governed by a Mayor and city council and provides the usual municipal services. Its population in 1950 was 3,855 persons. Jackson County's population was 12,916 persons in 1950. (Rev. Bd. Dec., p. 5).

Edna's industries consist of two meat processing plants, one of which is located beyond the city limits, and a welding company. The estimated labor force is 4,440 persons, some of whom are employed in industries located in other communities. Edna has one weekly newspaper, but neither Edna nor Jackson County has an AM, FM or TV station. (Int. Dec., p. 2).

Cosmopolitan Enterprises, Inc. and H. H. Huntley's applications were designated for hearing by the Commission in an order released April 11, 1966. Three of the hearing issues stated are as follows:

1. To determine whether the directional antenna systems proposed by the applicants can be adjusted and maintained as proposed.
2. To determine in light of the evidence adduced under the preceding issue whether either proposal would provide adequate protection to Station KWKH, Shreveport, Louisiana.
3. To determine, in the light of Section 307(b) of the Communications Act of 1934, as amended, which of the proposals would better provide a fair, efficient and equitable distribution of radio service. (Int. Dec., pp. 1-2).

After a consolidated evidentiary hearing, the Hearing Examiner issued an Initial Decision on August 9, 1967. The Examiner recommended that both applications be denied on grounds that neither applicant had shown that it could construct, adjust and maintain its proposed directional antenna in a manner that would not cause destructive interference to Station KWKH. (Int. Dec., p. 22). No preference was awarded under Section 307(b) of the Communications Act, *supra*, to either Edna or Yoakum, since neither community was found to have a superior need for the proposed service. (Int. Dec., p. 20).

After exceptions and oral argument, the Federal Communications Commission's Review Board, acting pursuant to delegated authority, released its Decision on December 17, 1968. The Board reversed the Hearing Examiner and concluded that Huntley's directional antenna system could be adjusted and maintained as proposed so as not to cause interference to the operation of Station KWKH. As to Cosmopolitan, the Review Board agreed with the Hearing Examiner that Cosmopolitan Enterprises, Inc. had failed to show that its proposed antenna would operate within its Maximum Expected Operating Values specified in its application. (Rev. Bd. Dec., p. 2).

At this point, it should be noted that both the Huntley and the Cosmopolitan applications proposed the use of a directional antenna. Such antennas have the characteristic of producing a shaped radiation pattern in which signal

radiation is greater in some directions than in others. That characteristic makes it possible for AM stations to operate without causing the prohibited interference to other stations, which often would result if radiation were equal in all directions.

The directional characteristic of a directional antenna is produced by a number of design features of which the phase of the electrical currents in the antenna towers and the ratios which exist between the antenna base currents in the array are among the most critical. Some of these design features, such as the electrical heights and the spacing of the antenna towers, are constant. In contrast, experience has shown that phases and base current ratios tend to vary from hour to hour and day to day during actual operation.

The terms Maximum Expected Operating Values constitute a phrase of art found in Section 73.150 of the Commission's Rules and Regulations, 47 C.F.R. §73.150. That Section of the Rules governs the technical showing which the Commission requires to be set forth in an application for an AM station construction permit whenever a directional antenna is proposed.

Section 73.150(a)(2) of the Rules and Regulations, 47 C.F.R. §73.150 (a)(2), requires applicants proposing a directional antenna to show the theoretical or "calculated" pattern which the array is designed to achieve. Because of the day-to-day fluctuations to be expected in phases and base current ratios and in other directional antenna design features, the Commission requires in Section 73.150(a)(6) of the Rules, 47 C.F.R. §73.150(a)(6), that directional antenna proponents also show the maximum radiation values which the pattern will not exceed in actual operation. These are known as maximum expected operating values and, after an authorization is granted, they are the basis for the operating values stated in a station's license.

Though recognizing that Cosmopolitan's application was defective on this issue, the Review Board, on its own initiative, assigned new MEOV to Cosmopolitan's antenna array. The Board then was able to conclude that Cosmopolitan was technically qualified. (Rev. Bd. Dec., pp. 8-9). It also concluded

that the application of Cosmopolitan warranted a preference under Section 307(b), *supra*. In reaching its decision, the Review Board attached decisional significance to the fact that Edna, while smaller in population than Yoakum, is a county seat. (Rev. Bd. Dec., p. 2).

On January 16, 1969, H. H. Huntley filed an Application for Review with the Federal Communications Commission. That application, filed pursuant to Section 1.115 of the Commission's Rules, 47 C.F.R. §1.115, sought review by the Commission *en banc* of the Review Board's Decision. Huntley's Application for Review presented these questions:

- a) Having found adversely as to the ability of Cosmopolitan Enterprises, Inc. to adjust and maintain its directional antenna array as proposed, did the Review Board err by failing to disqualify that applicant?
- b) Did the Review Board commit error by amending Cosmopolitan's MEOV proposal on its own motion, without affording notice or right to voice objection to H. H. Huntley?
- c) Did the Review Board err under the Section 307(b) issue by assigning excessive evidentiary weight to the status of Edna, Texas, as a county seat?
- d) Did the Review Board err in concluding that a grant of the Cosmopolitan Enterprises, Inc. application and a denial of the H. H. Huntley application would provide a fair, efficient and equitable distribution of broadcast facilities among the several states and communities? (App. for Rev., pp. 1-2).

In the Application for Review, H. H. Huntley demonstrated, *inter alia*, that the Review Board's Decision disregarded existing Commission rules and policy in two areas. The Application showed that never before had an applicant, which was found unable to adjust and maintain its directional antenna as proposed, been held to be technically qualified to operate a standard broadcast

station. (App. for Rev., p. 5). Huntley also showed that the Commission had never placed primary decisional significance on the fact that a community was a county seat. (App. for Rev., p. 11, *et seq.*).

Despite these questions of novel impression and the errors cited by the Appellant, the Commission, in its July 25, 1969 Order, denied the Application for Review without stating any reason in support of its action. (Order FCC 69-798).

SUMMARY OF ARGUMENT

The Decision of the Review Board, which found Cosmopolitan Enterprises, Inc. technically qualified, contravenes Section 308(b) of the Communications Act of 1934, as amended, 47 U.S.C. §308(b), 74 Stat. 889, and the Federal Communications Commission's Rules and Regulations. The Board exceeded its delegated authority when it failed to disqualify Cosmopolitan, which was found unable to adjust and to maintain its directional antenna in the manner proposed by that applicant in its application and in the hearing record itself. In effect, the Review Board's Decision is contrary to both statute and precedent by awarding a license to an applicant which has failed to show its basic qualifications. H. H. Huntley has also been deprived of his right to a fair hearing and to the procedural due process provided by statute and regulation and guaranteed to him by the Fifth Amendment to the Constitution, U. S. Const., Amend. V. Huntley was not afforded notice nor the opportunity to be heard when the Review Board *sua sponte* amended Cosmopolitan Enterprises, Inc.'s. application by substituting new Maximum Expected Operating Values (MEOV).

The determination of the Review Board in assigning primary decisional significance to the status of Edna, Texas, as a county seat constitutes an arbitrary and capricious act in contravention of Section 307(b) of the Communications Act, *supra*, and the established policy of the Federal Communications Commission. H. H. Huntley introduced substantial evidence which established that Yoakum, Texas, is a superior site for a standard broadcast facility and that its proposal will provide a fair, efficient and equitable distribution of broadcast services.

The failure of the Commission to grant review of its Board's Decision constitutes an arbitrary and capricious act in excess of the Commission's authority as defined by statute and precedent. In view of the significant questions of policy raised by Huntley's Application for Review, the Commission's Order denying review was an abuse of discretion.

ARGUMENT

I

THE DECISION OF THE REVIEW BOARD FINDING COSMOPOLITAN ENTERPRISES, INC. TECHNICALLY QUALIFIED DEPARTS FROM STATUTORY AND REGULATORY STANDARDS AND DEPRIVES APPELLANT OF HIS RIGHT TO A FAIR HEARING

A. Statutory and Regulatory Basis of FCC AM Broadcast Adjudications

Adjudicatory proceedings before the Federal Communications Commission are conducted in accordance with a well established body of statutory and regulatory requirements which have as their goal a full and impartial hearing of factual issues and the affording of procedural due process of law to all parties. In the case of all such adjudicatory proceedings the question of what constitutes due process and a full and impartial hearing must be answered by reference to the Communications Act of 1934, as amended, 47 U.S.C. §§151, *et seq.*, 48 Stat. 1064 (1934), as amended, the Administrative Procedure Act, 5 U.S.C. §§500, *et seq.*, 81 Stat. 195 (1967), and the Rules and Regulations of the Federal Communications Commission, C.F.R., Title 47.

This proceeding arose as a result of applications having been filed with the Commission by H. H. Huntley and Cosmopolitan Enterprises, Inc. under Section 308(a) of the Communications Act of 1934, as amended, 47 U.S.C. §308(a), 66 Stat. 714 (1952). That Section authorizes the Commission to grant construction permits "... only upon written application therefor received by it. . . ." The statutory scheme embodied in Title III of the

Communications Act of 1934, as amended, 47 U.S.C. §301, *et seq.*, provides for the authorization of broadcast facilities on a demand basis. Unlike some agencies dealing with other areas of commerce, the Commission does not, in the field of AM broadcast licensing at least, announce in advance what frequencies and powers may be authorized in specific locations, and then invite the filing of applications for such facilities. Rather, under Section 308 of the Act, the Commission is empowered only to accept applications from the public and to grant or reject them to the extent they do or do not meet standards of the public interest, convenience and necessity. See *James O. Howton*, 2 FCC 68 (1935).

The statutory scheme does, to be sure, place a burden on the Commission to make available a nationwide radio system¹ and to encourage the larger and more effective use of radio in the public interest.² However, it is up to the individual applicant to present his specific proposal for such use. The statute places the burden of proposing to use radio in the public interest and of proving his qualifications to do so squarely on the applicant, and on the applicant alone, *Great Western Broadcasting Association v. FCC*, 68 U.S. App. D. C. 119, 94 F.2d 244 (1938). Use of the airwaves by those who have failed to show their qualifications is barred, *Folkways Broadcasting Company v. FCC*, 126 U.S. App. D. C. 393, 379 F.2d 447 (1967).

Section 319(a) of the Act describes the basic areas in which an applicant must prove his qualifications. Specifically named are ". . . the citizenship, character, and the financial, technical, and other ability of the applicant to construct and operate the station. . . ." Section 319(a) also places on the applicant the burden of specifically showing, *inter alia*:

Ownership and location of the proposed station
Frequencies desired
Hours of operation

¹ 47 U.S.C. §151.

² 47 U.S.C. §303(8).

Purpose for which station is to be used

Type of transmitting apparatus

Power to be employed

The foregoing requirements as to the showing required of applicants are implemented in the following Sections of the Commission's Rules and Regulations:

Section 1.511	Applications required
Section 1.514	Content of applications
Section 1.516	Specification of facilities
Section 1.531	Formal and informal applications
Section 1.533	Application forms for authority to construct a new station or make changes in an existing station

Where two or more applications are concurrently on file with the Commission and the grant of one may adversely affect the disposition of another, each applicant so affected is entitled to a consolidated hearing, *Ashbacker Radio Corp., v. FCC*, 326 U.S. 327 (1945). In this eventuality the hearing requirements of Section 5 of the Administrative Procedure Act, 5 U.S.C. §554, 80 Stat. 384, Section 309(e) of the Communications Act of 1934, as amended, 47 U.S.C. §309(e), 66 Stat. 715, and Subpart B, Part I of the Commission's Rules and Regulations, 47 C.F.R. §§1.201, *et seq.*, are applicable. The burden of proceeding with the introduction of evidence and the burden of proof in such hearings are placed on each applicant by Section 309(e) of the Communications Act of 1934, as amended, 47 U.S.C. §307(e), *supra*.

In the course of presenting evidence in a hearing the nature of the presentation made is governed by the proposal contained in the application, *WCAR, Inc.*, 5 Pike & Fischer RR 753 (1949). Evidence in substantial variance with the terms of the application cannot be received in evidence, *Westinghouse Radio Stations, Inc.*, 9 Pike & Fischer RR 323 (1953). As in *Westinghouse*, the Commission has consistently held that where an applicant desires to introduce evidence in substantial variance from a term of his application he must first obtain leave

to amend the application to cure the variance. See *Edina Corp.*, 24 Pike & Fischer 436 (1962). The standards of timeliness and good cause for such amendments in hearing are established in Section 1.522(b) of the Commission's Rules and Regulations, 47 C.F.R. §1.522(b).

B. Irregularities in the Review Board's Procedures and Decision

In reviewing an order of an administrative agency, this Court has the responsibility of ascertaining whether that agency has acted in accordance with existing statutory standards, and the agency's own rules and regulations. If this Court finds that an agency's order contravenes these established standards, then it must reverse the order and remand the proceeding to the agency for further proceedings in compliance therewith. Section 10(e) of the Administrative Procedure Act, 5 U.S.C. §706, 80 Stat. 393, specifically outlines the factors to be considered in judicial review:

The reviewing court shall . . .

- (2) hold unlawful and set aside agency action, findings, and conclusions found to be
 - (A) arbitrary, capricious, an abuse of discretion, or otherwise not in accordance with law;

Utilization of these standards in the instant case will result in a finding that the Review Board's Decision is defective. The Board has not adhered to the requirements described above which govern the conduct of evidentiary hearings before the Federal Communications Commission.

Because it proposed to employ a directional antenna in connection with its proposed Edna, Texas, station, Cosmopolitan included in its application and in its evidentiary presentation in the hearing a showing as to the Maximum Expected Operating Values of the proposed antenna array as required by Section 73.150 (a)(6), 47 C.F.R. §73.150(a)(6). That Section reads as follows:

(6) In the event actual inverse distance field intensities expected to be determined in practice (that is, the values determined from actual measurements, particularly in sharp nulls) are different from the calculated values in subparagraphs (2) and (3) of this paragraph, the maximum expected operating values (MEOV) as well as the calculated values shall be shown on both the full patterns and the enlarged sections.

At the time it designated the Cosmopolitan application for consolidated hearing with Mr. Huntley's proposal, the Commission could not conclude that Cosmopolitan had made an adequate showing in its application as to its ability to adjust and maintain its directional antenna as proposed in its application. Consequently, it included among the issues to be tried, the following:

To determine whether the directional antenna systems proposed by the applicants can be adjusted and maintained as proposed.³

It must be emphasized that the "antenna systems proposed" are those described in the respective applications of Cosmopolitan and Mr. Huntley. It follows, therefore, that a showing that Cosmopolitan could adjust and maintain its antenna in compliance with specifications other than those set forth in its application would not meet the burden placed on that applicant under the issue. See *Westinghouse Radio Stations, Inc.*, 9 Pike & Fischer RR 323 (1953); *WCAR, Inc.*, 5 Pike & Fischer RR 753 (1949).

Examination of the Review Board's Decision reveals that the Board specified, *sua sponte*, new operating maxima for Cosmopolitan which are in most instances far in excess of the MEOV proposed by that applicant. A comparison is outlined here:

³ The issue also applied to Mr. Huntley's directional proposal. The Review Board found favorably as to Huntley and no appeal from that finding has been filed.

Azmuth	MEOV Specified by Applicant (MV/M)	MEOV Specified Para 15(a) of Decision (MV/M)
346°	17.0	17.0
356°	<u>12.2</u>	<u>16.4</u>
6°	<u>9.5</u>	<u>12.5</u>
16°	<u>13.5</u>	<u>15.7</u>
26°	<u>20.0</u>	<u>20.7</u>
36°	17.5	17.5
46°	15.0	15.0
56°	20.5	20.5
66°	19.0	19.0

Values have been underscored above to show where the Review Board established new MEOV in excess of those proposed by Cosmopolitan in its application, which were also specified by Cosmopolitan in its evidentiary showing in the hearing. Those new MEOV were specified by the Review Board, *sua sponte*, after it had found in Paragraph 7 of its Decision that Cosmopolitan could not maintain its directional antenna adjustment within the MEOV which Cosmopolitan had proposed.

The Review Board's Decision which *sua sponte* amended Cosmopolitan Enterprises, Inc's. application by substituting new Maximum Expected Operating Values contravenes the Commission's Rules, Regulations and policy. After a finding that Cosmopolitan's showing was defective on the maintenance and adjustment issue, the Review Board imposed different MEOV which then allowed the Board to hold that Cosmopolitan was qualified. The Review Board's action constitutes prejudicial error because MEOV, which are a major part of an application specifying directional antenna operation, cannot be altered by the Board solely on its own initiative. As was shown, *supra*, page 10, the statutory scheme places the *entire* burden of proposing a radio use on the applicant who is solely responsible for proving his technical and other qualifications.

In its substantial effect, the action of the Review Board in substituting its MEOV for those of Cosmopolitan constitutes a waiver of Section 73.150(a)(6)

of the Commission's Rules and Regulations, *supra*, which places the sole burden of proposing MEOV on the applicant. It is axiomatic that the Review Board possesses only that power which has been specifically delegated to it by the Commission. The authority which has been so delegated to the Review Board is set forth in Sections 0.361 and 0.365 of the Commission's Rules and Regulations, 47 C.F.R. §§0.361, 0.365. Nowhere is the Review Board granted power to waive substantive technical rules. In cases where the Commission believes that a waiver of a rule might be appropriate, the specific power to grant such a waiver is specifically embodied in the Commission's hearing order. See *Ottawa Broadcasting Corp.*, 1 FCC 2d 1502, 6 Pike & Fischer RR 2d 393 (1965). See also, *Nebraska Rural Radio Association (KRYN)*, 1 FCC 2d 1192, 6 Pike & Fischer RR 2d 488 (1965), where the Review Board held that absent a specific delegation of authority a Hearing Examiner is without power to waive a rule. The same principle of delegation of powers applies to acts of the Review Board itself.

It must be emphasized that the procedure whereby the Review Board has substituted new MEOV for those proposed by Cosmopolitan departs from established Commission policy as enunciated in *Edina Corp.*, 24 Pike & Fischer RR 436 (1962). There, it is stated that it is the practice of the Commission when issuing construction permits only to specify the MEOV "proposed by the applicant." It also is said that where a proof of performance shows that radiation will exceed MEOV a license cannot be issued. The reason is that a permittee cannot be licensed "... for any other radiation pattern than that proposed in its application." From the context, it is obvious that the "application" referred to is the application for a construction permit.

The *Edina* case makes it clear that the MEOV regularly specified in a construction permit are the MEOV specified by the applicant in its application for a construction permit. The procedure followed by the Review Board departs from the usual practice established by the Commission. *Edina* also is important because it declares that if the MEOV proposed by the applicant are shown to

be excessive in practice, a license cannot issue. Therefore, if the record of evidentiary hearing shows that the MEOV proposed by the applicant cannot be maintained, then a construction permit cannot issue, since it would be illogical for the Commission to authorize construction of a facility which could never be licensed for operation.

The principle established by *Edina* is that a demonstrated inability to maintain the radiation of a directional antenna within MEOV is a fatal defect, whether the fact is demonstrated in a license application or after an evidentiary hearing. Consequently, the Review Board's conclusion that Cosmopolitan cannot adjust and maintain its antenna as proposed in its application must result in disqualification.

It is of particular significance that what the Review Board did, *i.e.*, substitute new MEOV for Cosmopolitan after the hearing had been held and the record closed, could *not* have been done by Cosmopolitan itself in accordance with the Commission's Rules and case precedents. The Commission decided in *Beacon Broadcasting Systems, Inc.*, 21 Pike & Fischer RR 659 (1961), that a change in MEOV specifications constitutes a major amendment to an application. In this respect, it is of the same gravity as a change in frequency, power, hours of operation or station location. See Section 1.571(j) of the Commission's Rules and Regulations, 47 C.F.R. §1.571(j).

Where engineering amendments are made in hearing, the applicant must show compliance with the requirements of good cause and timeliness set forth in Section 1.522(b) of the Rules, 47 C.F.R. §1.522(b). That Section provides, in pertinent part, as follows:

(b) . . . In the case of requests to amend the engineering proposal in standard broadcast applications . . . good cause will be considered to have been shown only if, in addition to the usual good cause considerations, it is demonstrated that (1) the amendment is necessitated by events which the applicant could not reasonably have foreseen . . ., (2) the amendment could not reasonably have been made prior to

designation for hearing; and the amendment does not require an enlargement of issues or the addition of new parties to the proceeding.

The stark fact which faced the Review Board is that at no time did Cosmopolitan avail itself of its right under Section 1.522(b) to seek leave to amend its application to specify new MEOV. Furthermore, the amendment would not have been allowed had Cosmopolitan proffered it after the record had been closed and the Initial Decision issued by the Hearing Examiner, because it could not have shown the good cause or due diligence required by the Rule, *WMGS, Inc.*, 14 FCC 2d 428, 13 Pike & Fischer RR 2d 1257 (1968); *KXYZ Television, Inc.*, 10 FCC 2d 937, 10 Pike & Fischer RR 2d 681 (1967). Thus, it can be clearly seen that what the Review Board did was to brush aside an entire body of positive regulation and case precedent to save Cosmopolitan from the position of default under the antenna adjustment and maintenance issue in which it had placed itself by its inaction.

C. The Review Board's *Sua Sponte* Action Denies Huntley Procedural Rights Provided by Statute and the Commission's Rules

It has been recognized that a fundamental right of an applicant for a standard broadcast station is a full and fair hearing prior to a grant of one of two mutually exclusive licenses. In *Ashbacker Radio Corp. v. FCC*, 326 U.S. 327, 330 (1945), the Court stated:

We do not think it is enough to say that the power of the Commission to issue a license on a finding of public interest, convenience, or necessity supports its grant of one of two mutually exclusive applications without a hearing of the other.

The *Ashbacker* principle is apposite here because Huntley was denied the opportunity in a full hearing or otherwise to present objections to the Board's *sua sponte* amendment of Cosmopolitan's application. This prejudicial act by the Review Board resulted in making an otherwise unqualified applicant the grantee

of a standard broadcast permit.. Mr. Justice Frankfurter, in *FCC v. Pottsville Broadcasting Co.*, 309 U.S. 134, 144-145 (1940), enunciated the philosophy which must pervade the conduct of an administrative hearing:

. . . the laws under which these agencies operate prescribe the fundamentals of fair play. They required that interested parties be afforded an opportunity for hearing and that judgment must express a reasoned conclusion.

Huntley did not receive a full hearing within the meaning required by *United States v. Storer Broadcasting Co.*, 351 U.S. 192, 202 (1956):

We agree that a "full hearing" . . . means that every party should have the right to present his case or defense by oral or documentary evidence, to submit rebuttal evidence and to conduct such cross-examination as may be required for a full and true disclosure of the facts.

Section 1.522(b) of the Rules, *supra*, provides that engineering amendments in hearing can only be made upon written petition properly served on the parties. As in the case of all interlocutory petitions by Cosmopolitan, Mr. Huntley is given the right to respond under Section 1.294 of the Rules governing oppositions and replies, 47 C.F.R. §1.294. However, at no time did Mr. Huntley receive notice of the Review Board's intention to amend *sua sponte* Cosmopolitan's application and to consider antenna specifications not in the hearing record. The result is that the Review Board has denied to Mr. Huntley his absolute right to state his case both as to the merits of the procedure proposed to be followed and on the substance of the question presented before Cosmopolitan was rescued from disqualification.

It is Mr. Huntley's firm position that his procedural rights must be observed so that the ultimate decision in this matter will be based on facts of record and the law and not on some unknown standards developed by the Review Board *de hors* the record as to which Huntley is denied his right to comment. Any procedure whereby the Review Board intervenes unilaterally to substitute extra record data as a basis for its decision, and on its own motion seeks to cure an

evidentiary deficiency of one of two mutually exclusive parties to a hearing, renders the procedure invalid. If Cosmopolitan must be disqualified for its failure to prove its technical qualifications, so be it. It is not the proper role of the Commission or its Review Board to remedy the defect by taking extraordinary and unprecedented action, and thus tilt the scales of justice in an adversary proceeding.

D. The Review Board's Action Denies Huntley Procedural Due Process of Law Guaranteed by the Constitution of the United States

The Review Board's *sua sponte* amendment of the MEOV stated in Cosmopolitan Enterprises, Inc.'s. application was accomplished without affording Huntley the right to notice nor the right to offer rebuttal. As such, this unilateral action, which resulted in the grant of Cosmopolitan's application and the denial of Huntley's, violated the procedural safeguards required by the Due Process Clause of the Fifth Amendment to the Constitution. If a party is denied the right to be heard fully, the proceeding violates due process. In the instant case, Huntley was denied this procedural protection by the act of the Review Board and, as such, the full constitutional rights of H. H. Huntley were denied.

It long has been recognized and held that the proceedings of an administrative tribunal must satisfy the requirements of due process. See *Federal Radio Commission v. Nelson Bros. Bond & Mortgage Co.*, 289 U.S. 266 (1933). Though it has been said that, "The Fifth Amendment guarantees no particular form of procedure . . ." *NLRB v. Mackay Radio & Telegraph Co.*, 304 U.S. 333, 351 (1938), it also is clear that upon review a court has the mandate of insuring that an administrative agency complies with all procedural safeguards. In *Tampa Times Co. v. FCC*, 230 F.2d 224, 227 (1956), this principle was stated:

"So long as it [FCC] observes all *procedural requirements*, considers the issues, reaches reasoned conclusions, and renders reasoned judgments, courts cannot superimpose their opinions upon these matters." [Emphasis added]

Huntley's position is that the Review Board has not observed basic procedural requirements. By denying Huntley *any* opportunity to rebut the amendment to Cosmopolitan's application and the alteration of its MEOV, the Decision of the Review Board is in contravention to the Fifth Amendment and must be overturned. See *American Broadcasting Co., Inc. v. FCC*, 85 U.S. App. D. C. 343, 348, 179 F.2d 437, 443 (1949).

Though not referring directly to a proceeding before the Federal Communications Commission, the principle stated in *Morgan v. United States*, 304 U.S. 1, 18 (1938), is applicable:

Those who are brought into contest with the Government in a quasi-judicial proceeding aimed at the control of their activities are entitled to be fairly advised of what the Government proposes and to be heard upon its proposals before it issues its final command.

These two elements of being apprised of the Review Board's act and the opportunity to be heard have been denied to Huntley. *Morgan* requires that the Review Board give Huntley notice of the proposed amendment and the right to present rebuttal evidence. This was not done.

In accordance with the principle enunciated in *Morgan*, it is the pervasive requirement that due process requires a full and complete hearing on all issues before an administrative agency may render a decision. In *L. B. Wilson, Inc. v. FCC*, 83 U.S. App. D. C. 176, 185, 170 F.2d 793 (1948), this court said:

An essential element of due process is an opportunity to be heard before the reaching of a judgment. . . . The Commission is not, strictly, a court, but it has quasi-judicial powers and its proceedings must satisfy "the pertinent demands of due process."

The essence of the appellant's objection is that the decision of the Review Board is defective constitutionally because a full hearing on all the issues was not accorded to Huntley. Support for this position is found in *WJR, The*

Goodwill Station v. FCC, 174 F.2d 226 (1948), *rev'd on other grounds*, 337 U.S. 265 (1949), which it was stated:

"The word 'hearing' contemplates an opportunity to be heard. That is not merely the privilege to be present when the matter is being considered, but the right to present one's contention, and to support the same by proof and argument."

Of course, Mr. Huntley was not even present when the Review Board, acting on exceptions to an initial decision, decided to cure Cosmopolitan's disqualification.

Thus, measured against the Constitutional standard of due process of law, it is obvious that the Review Board's action, in addition to violating specific statutory and regulatory provisions, denied to Mr. Huntley the full hearing guaranteed to him under the Fifth Amendment to the Constitution of the United States. For that reason alone the Board's Decision cannot stand.

II

THE DETERMINATION OF THE REVIEW BOARD IN ASSIGNING PRIMARY DECISIONAL SIGNIFICANCE TO THE STATUS OF EDNA, TEXAS AS A COUNTY SEAT CONSTITUTES AN ARBITRARY AND CAPRICIOUS ACT IN CONTRAVENTION OF SECTION 307(b) OF THE COMMUNICATIONS ACT AND THE ESTABLISHED POLICY OF THE FEDERAL COMMUNICATIONS COMMISSION

A further major prejudicial error in the Review Board's Discussion was the finding by the Review Board that Cosmopolitan's application warranted a preference under Section 307(b) of the Communications Act of 1934, as amended, 47 U.S.C. §307(b), 49 Stat 1475. In reaching that conclusion the Review Board erred in placing undue evidentiary weight on the status of Edna, Texas, as a county seat and too little evidentiary weight to the superiority of Yoakum, Texas, in population and in other matters of decisional importance.

Section 307(b) of the Act outlines the criteria to be followed by the Commission in allocating broadcast facilities:

- (b) In considering applications for license, and modification and renewals thereof, when and insofar as there is demand for the same, the Commission shall make such distributions of licenses, frequencies, hours of operation, and of power among the several states and communities is to provide a fair, efficient and equitable distribution of radio source to each of the same.

Examination of the Commission's policy in carrying out its mandate under this section reveals that the Review Board improperly awarded a 307(b) preference to Cosmopolitan.

The Board chose to prefer Edna, Cosmopolitan's community, over Yoakum, the city to be served by Huntley, on two related grounds. The first is the comparative growth patterns of the counties in which each community is located. Ignoring Yoakum's 14.4% population superiority (5,761 persons as compared to 5,038 persons) and its eminence as an industrial and commercial center,

the Review Board concluded that the growth in population of the county in which Edna is situated and the decline in population in the two counties in which Yoakum is located mean that Edna has the greater need for a transmission service. The Board cited *Radio Haddonfield, Inc.*, 37 FCC 168, 3 Pike & Fischer RR 2d 25 (1964) and *Five Cities Broadcasting Co., Inc.*, 35 FCC 501, 504, 1 Pike & Fischer RR 2d 279, 283 (1963). These cases have been misapplied by the Board.

The basic test of the relative need of communities for a transmission service is their population and the number of standard broadcast facilities in each of the communities, *Kent-Ravenna Broadcasting Co.*, 22 Pike & Fischer RR 611 (1962). On the basis of this standard, Yoakum, with the greater population has the greater need for a transmission service. Neither Yoakum nor Edna now has any such facility.

Under *Kent-Ravenna* it is not permissible, in most cases, to look beyond the communities involved, for example, to counties or regions, in assessing the need for a transmission source. Absent unusual circumstances, the comparison of communities usually stops at the city limits. In *Five Cities Broadcasting Co., supra*, and earlier in *Pioneer States Broadcasters, Inc.*, 34 FCC 625, 25 Pike & Fischer RR 221 (1963), the Review Board held that where there is a substantial difference in the number of reception sources available to the communities being compared (*Pioneer States*) or where one community is "overshadowed" by a nearby metropolis (*Five Cities*), the relative importance of each community to the area which the proposed stations will serve is also a factor to be considered. "Overshadowing" was also the principal basis for a similar Review Board holding in *Radio Haddonfield, Inc., supra*.

In the instant case, those special circumstances which warrant a departure from the Commission's policy statement on *Kent-Ravenna* are not present. Yoakum and Edna receive the identical number of reception services. Hence, there is no *Pioneer States* situation. Additionally, neither Yoakum nor Edna are "overshadowed" by a nearby metropolis. *Five Cities* and *Radio Haddonfield*

clearly are distinguishable. Thus, the Review Board departed from the test prescribed by the Commission and extended its own holdings in more recent cases to a set of facts entirely different from those on which the exceptions from the general rule were based. The Review Board's major new approach to Section 307(b) comparisons applied an innovative policy not sanctioned by the Commission.⁴

The Review Board also acted erroneously when it assigned primary decisional significance to Edna's status as a county seat. This also is without precedent in prior Commission decisions. Section 307(b) preferences have been granted to communities which happen to be county seats, but in each one of those cases the fact that preferred community was a county seat was just one fact which was included with others of greater decisional significance. C.f. *Radio Haddonfield, Inc.; Border Broadcasters, Inc.*, 13 Pike & Fischer RR 463 (1956); *Southern Indiana Broadcasters, Inc.*, 24 FCC 521, 15 Pike & Fischer RR 349 (1958).

It is well known that a community often becomes a county seat as the result of historical accident. Often there is little correlation between the size and needs of a community and the fact that it is a county seat. To cite a nearby example, it cannot be reasonably maintained that Rockville, Maryland, the County Seat of Montgomery County (population: 26,090 persons) would have a need for a first local transmission service superior to that of Silver Spring, the largest community in the County and the third largest city in Maryland (population: 66,348 persons), for a similar first service.

Nevertheless, in the instant case the Review Board did indeed exalt the need of Edna over that of Yoakum principally because of the former's status as a county seat. It did so with no evidence in the record designed to show any direct relationship between that status and the need of Edna for a first local transmission service. Any such relationship as may exist was apparently

⁴ See Argument, *infra*, page 26 re lack of Review Board authority to establish new policy.

presumed to exist on an *a priori* basis. Such a presumption does not meet the requirements of Sections 7 and 10(e) of the Administrative Procedure Act, 5 U.S.C. §§556, 706, 80 Stat. 386, 393, that decisions in adjudicatory proceedings must be based on facts of record and supported by substantial evidence.

For all of these reasons the Review Board's conclusion under the Section 307(b) issue must be reversed.

III

THE FAILURE OF THE COMMISSION TO GRANT REVIEW OF THE
REVIEW BOARD'S DECISION WAS ARBITRARY AND CAPRICIOUS
AND AN ABUSE OF DISCRETION

The Decision of the Review Board was taken under authority delegated to that staff body by the Commission in Section 0.365 of the Rules, 47 C.F.R. §0.365, to review initial decisions of hearing examiners. The Review Board was created and its jurisdiction delegated to it following the enactment of Public Law 87-192, 75 Stat. 420 (1961), which, *inter alia*, amended Section 5 of the Communications Act, 47 U.S.C. §155, to authorize appropriately qualified staff members to review routine actions by lower authorities. The legislative history of P.L. 87-192 and the Commission's subsequent interpretations of the nature of the authority conferred therein indicate with consistency that the legislative purpose was to permit the Commission to delegate to an inferior body the routine review functions which hitherto had placed an inordinate burden on the Commission's time and energies. The Congressional intent is clear, however, that the Commission could not delegate to its staff its policy making functions.

Support for the proposition that the Commission has neither delegated to the Review Board the authority to waive Rules or Regulations nor the right to make policy can be found in the report of the Senate Hearings on the Bill for Reorganization of the Federal Communications Commission (Hearings before the Communications Subcommittee of the Committee on Commerce, U.S. Senate, 87th Congress, 1st Session (1961). Newton N. Minow, then Chairman of the Commission and principal proponent of the proposed legislation, told the Subcommittee:

"We are not going to delegate the development of policy on major legal doctrines to an employee board. . ."
(Hearings, *supra*, p. 5)

It also is clear, that Commission specifically did not delegate its policy making function because it has a mandatory responsibility to review any decision which deviates from policy.

"If the Commission concludes that the case, although involving routine principles, does raise a series of questions of factual error on some significant findings or a departure from established law or policy, review is of course called for." (*Hearings, supra*, p. 70, Mr. Minow)

In its Report and Order of May 13, 1964, 2 Pike & Fischer RR 2d 1571 (1964), modifying its original delegation of functions to the Review Board, the Commission stated:

The objective is that *all cases* involving novel or important issues of law or policy be reviewed by the Commission, and that all other cases be reviewed by the Board. [2 Pike & Fischer RR 2d 1571, 1572-1573.]

Furthermore, the Commission stated that if the regular procedures established by the delegation rules fail to bring such cases directly before the Commission for decision

". . . the parties may obtain full Commission review by calling the major issues involved to the Commission's attention in an application for review of the Board's decision." [2 Pike & Fischer RR 2d 1571, 1573]

As has been shown previously in this brief, the Review Board's Decision is invested with a number of procedural and substantive errors. Some of those infirmities involve matters of first impression in which the Review Board is, in fact, making new policy; a function clearly not delegated to it. In other instances the Board's action raises the most serious questions of violation of statutory and regulatory authority. All of these questions were directly and timely presented to the Commission by Mr. Huntley in his Application For Review.

In the circumstances the failure of the Commission to grant review was arbitrary and capricious. In those instances where review was not mandatory, the Commission's refusal to consider the matters raised by Mr. Huntley in his Application For Review was an abuse of discretion. Under both headings, the action of the Commission denying review is reversible error under Section 10(e) of the Administrative Procedure Act, 5 U.S.C. 706, 80 Stat. 393.

In his Application for Review, Mr. Huntley drew the Commission's attention to the following assignments of error:

1. Substantive Issues

a. Having found that Cosmopolitan had failed to meet its burden under the antenna adjustment and maintenance issue, the Board erred in failing to disqualify that applicant. As shown *supra*, pages 13-16, the specification of MEOV is an absolute requirement of the Rules. MEOV are a matter of major importance and are treated in the Rules as akin to the frequency, power, location and hours of operation of a station. *The Commission had never previously granted an application where an applicant had been unable to show that his station could operate within his proposed MEOV on a day to day basis.* Thus, the Review Board's action was a departure from precedent, and constituted an act in violation of a substantive rule, Section 73.150(a)(6). Review of that action by the full Commission was mandatory.

b. The Review Board preferred Cosmopolitan over Huntley under the Section 307(b) issue on the grounds that Edna, Texas, is a county seat and because of the population growth of the county in which Edna is located. As to the status of Edna as a county seat it has been shown, *supra*, pages 22-25, that the Commission had never awarded primary decisional significance to such status. Thus the Review Board was establishing new policy in excess of its delegation. As to area service, it has been shown, *supra*, page 23, that the Commission's basic policy statement in *Kent-Ravenna Broadcasting Co.*, 22 Pike & Fischer RR 611 (1962), does not permit any decisional weight to be given

to such considerations. Here, the Review Board acted in conflict with the established policies of the Commission. Again, full Commission review was mandatory.

2. Procedural Considerations

a. The procedure whereby the Review Board, with a closed record before it in an adversary proceeding, promulgated *sua sponte* new MEOV for Cosmopolitan was such a flagrant departure from the norms of just and orderly procedures as to make Commission review mandatory. Such action was clearly in excess of delegated authority, since the Commission has not and cannot authorize action in violation of statutory and regulatory requirements.

b. Review by the full Commission was also mandatory with regard to the manner in which the Review Board acted as to Cosmopolitan's MEOV. The denial of Huntley's Constitutional, statutory and regulatory rights to prior notice and full hearing as to that action should not have been permitted to stand.

In the ultimate analysis, the sole power to grant or deny applications in the public interest, convenience and necessity has been vested by the Congress in the Commission. While the Commission is authorized in Section 5(d) of the Communications Act, *supra*, to delegate certain routine review functions to its staff, it is prohibited by law from delegating ultimate responsibility for such review, *Federal Radio Commission v. Nelson Brothers Bond and Mortgage Co.*, 289 U.S. 266, 285-286 (1933). See *Krug v. Lincoln National Life Insurance Co.*, 245 F.2d 848 (5th Cir. 1957). See also Section 8, Administrative Procedure Act, 5 U.S.C. § 557, 80 Stat. 387.

In light of the numerous errors of substance and procedure contained in the Review Board's Decision and the several novel policy questions on which the Board ruled, it was incumbent upon the Commission to review that Decision *en banc*. Its failure to do so was, at worst, a direct violation of its statutory mandate and, at least, an egregious abuse of discretion.

CONCLUSION

This appeal brings before this Court a Decision by an intermediate reviewing body which has been shown to violate the procedural and substantive provisions of numerous statutes and administrative regulations. An applicant who has diligently prosecuted his proposal has been the victim of a remarkable departure from established procedures and has been denied his Constitutional and statutory right to a full and fair hearing on all of the issues. He has seen the Commission's Review Board arbitrarily sweep aside positive statutory and regulatory requirements in order to grant the application of his competition who had failed to prove its basic technical qualifications. In addition, this appeal presents this Court with a clear case of failure by the Commission itself to exercise its statutory obligation to review the acts of its subordinates with regard to the application of legal principles and the formulation of novel policies.

Since Cosmopolitan Enterprises, Inc. has thus failed on the record to prove its technical qualifications, in the face of an absolute technical issue, its application must be denied. Under Section 307(a) and 309(a) of the Communications Act of 1934, as amended, 47 C.F.R. §§ 307(a), 309(a) 48 Stat. 1083, 74 Stat. 889, the Commission may grant applications only upon a positive finding that such grant will serve the public interest, convenience and necessity. This cannot be done as far as Cosmopolitan is concerned. Consequently, this Court, acting pursuant to Section 402(h) of the Act, 47 U.S.C. § 402(h), 66 Stat. 718, must remand this case to the Commission with an order that the Review Board's Decision of December 17, 1968, be set aside, and that an order be entered granting Mr. Huntley's application and denying that of Cosmopolitan Enterprises, Inc.

Respectfully submitted,

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November 14, 1969

APPENDIX A

The Administrative Procedure Act.

Sec. 5: (b) Persons entitled to notice of an agency hearing shall be timely informed of—

- (1) the time, place, and nature of the hearing;
- (2) the legal authority and jurisdiction under which the hearing is to be held; and
- (3) the matters of fact and law asserted.

When private persons are the moving parties, other parties to the proceeding shall give prompt notice of issues controverted in fact or law; and in other instances agencies may by rule require responsive pleading. In fixing the time and place for hearings, due regard shall be had for the convenience and necessity of the parties or their representatives.

(c) The agency shall give all interested parties opportunity for—

- (1) the submission and consideration of facts, arguments, offers of settlement, or proposals of adjustment when time, the nature of the proceeding, and the public interest permit; and
- (2) to the extent that the parties are unable so to determine a controversy by consent, hearing and decision on notice and in accordance with sections 556 and 557 of this title.

(d) The employee who presides at the reception of evidence pursuant to section 556 of this title shall make the recommended decision or initial decision required by section 557 of this title, unless he becomes unavailable to the agency. Except to the extent required for the disposition of *ex parte* matters as authorized by law, such an employee may not—

- (1) consult a person or party on a fact in issue, unless on notice and opportunity for all parties to participate; or
- (2) be responsible to or subject to the supervision or direction of an employee or agent engaged in the performance of investigative or prosecuting functions for an agency.

An employee or agent engaged in the performance of investigative or prosecuting functions for an agency in a case may not, in that or a factually related case, participate or advise in the decision, recommended decision, or agency review pursuant to section 557 of this title, except as witness or counsel in public proceedings. This subsection does not apply—

- (A) in determining applications for initial licenses;
- (B) to proceedings involving the validity or application of rates, facilities, or practices of public utilities or carriers; or
- (C) to the agency or a member or members of the body comprising the agency.

(e) The agency, with like effect as in the case of other orders, and in its sound discretion, may issue a declaratory order to terminate a controversy or remove uncertainty.

(5 U.S.C. §554, 80 Stat. 384)

The Administrative Procedure Act.

Sec. 7: (c) Subject to published rules of the agency and within its powers, "employees presiding at hearings may—

- (1) administer oaths and affirmations;
- (2) issue subpoenas authorized by law;
- (3) rule on offers of proof and receive relevant evidence;
- (4) take depositions or have depositions taken when the ends of justice would be served;
- (5) regulate the course of the hearing;
- (6) hold conferences for the settlement or simplification of the issues by consent of the parties;
- (7) dispose of procedural requests or similar matters;
- (8) make or recommend decisions in accordance with section 557 of this title; and
- (9) take other action authorized by agency rule consistent with this subchapter.

(d) Except as otherwise provided by statute, the proponent of a rule or order has the burden of proof. Any oral or documentary evidence may be received, but the agency as a matter of policy shall provide for the exclusion of irrelevant, immaterial, or unduly repetitious evidence. A sanction may not be imposed or rule or order issued except on consideration of the whole record or those parts thereof cited by a party and supported by and in accordance with the reliable, probative, and substantial evidence. A party is entitled to present his case or defense by oral or documentary evidence, to submit rebuttal evidence, and to conduct such cross-examination as may be required for a full and true disclosure of the facts. In rule making or determining claims for money or benefits or applications for initial licenses an agency may, when a party will not be prejudiced thereby, adopt procedures for the submission of all or part of the evidence in written form."

(5 U.S.C. §556(c)(d), 80 Stat. 386)

Sec. 8: (c) Before a recommended, initial, or tentative decision, or a decision on agency review of the decision of subordinate employees, the parties are entitled to a reasonable opportunity to submit for the consideration of the employees participating in the decisions—

- (1) proposed findings and conclusions; or
- (2) exceptions to the decisions or recommended decisions of subordinate employees or to tentative agency decisions; and
- (3) supporting reasons for the exceptions or proposed findings or conclusions.

The record shall show the ruling on each finding, conclusion, or exception presented. All decisions, including initial, recommended, and tentative decisions, are a part of the record and shall include a statement of—

- (A) findings and conclusions, and the reasons or basis therefor, on all the material issues of fact, law, or discretion presented on the record; and
- (B) the appropriate rule, order, sanction, relief, or denial thereof.

(5 U.S.C. §557(c), 80 Stat. 387)

Sec. 10: To the extent necessary to decision and when presented, the reviewing court shall decide all relevant questions of law, interpret constitutional and statutory provisions, and determine the meaning or applicability of the terms of an agency action. The reviewing court shall—

- (1) compel agency action unlawfully withheld or unreasonably delayed; and
- (2) hold unlawful and set aside agency action, findings, and conclusions found to be—
 - (A) arbitrary, capricious, an abuse of discretion, or otherwise not in accordance with law;
 - (B) contrary to constitutional right, power, privilege, or immunity;
 - (C) in excess of statutory jurisdiction, authority, or limitations, or short of statutory right;
 - (D) without observance of procedure required by law;
 - (E) unsupported by substantial evidence in a case subject to sections 556 and 557 of this title or otherwise reviewed on the record of an agency hearing provided by statute; or

(F) unwarranted by the facts to the extent that the facts are subject to trial *de novo* by the reviewing court.

In making the foregoing determinations, the court shall review the whole record or those parts of it cited by a party, and due account shall be taken of the rule of prejudicial error.

(5 U.S.C. §706, 80 Stat. 393)

The Communications Act of 1934, as amended.:

(d) (1) When necessary to the proper functioning of the Commission and the prompt and orderly conduct of its business, the Commission may, by published rule or by order, delegate any of its functions (except functions granted to the Commission by this paragraph and by paragraphs (4), (5), and (6) of this subsection) to a panel of commissioners, an individual commissioner, an employee board, or an individual employee, including functions with respect to hearing, determining, ordering, certifying, reporting, or otherwise acting as to any work, business, or matter; except that in delegating review functions to employees in cases of adjudication (as defined in the Administrative Procedure Act), the delegation in any such case may be made only to an employee board consisting of three or more employees referred to in paragraph (8) of this subsection. Any such rule or order may be adopted, amended, or rescinded only by a vote of a majority of the members of the Commission then holding office. Nothing in this paragraph shall authorize the Commission to provide for the conduct, by any person or persons other than persons referred to in clauses (2) and (3) of section 1006(a) of Title 5, of any hearing to which such section 1006(a) applies.

(47 U.S.C. §115(a)(1), 75 Stat. 420)

Sec. 303: Except as otherwise provided in this chapter, the Commission from time to time, as public convenience, interest, or necessity requires, shall—

(f) Make such regulations not inconsistent with law as it may deem necessary to prevent interference between stations and to carry out the provisions of this chapter: *Provided, however,* That changes in the frequencies, authorized power, or in the times of operation of any station, shall not be made without the consent of the station licensee unless, after a public hearing, the Commission shall determine that such changes will promote public convenience or interest or will serve public necessity, or the provisions of this chapter will be more fully complied with;

(47 U.S.C. 303(f), 76 Stat. 150)

Sec. 307: (a) The Commission, if public convenience, interest, or necessity will be served thereby, subject to the limitations of this chapter, shall grant to any applicant therefor a station license provided for by this chapter.

(b) In considering applications for licenses, and modifications and renewals thereof, when and insofar as there is demand for the same, the Commission shall make such distribution of licenses, frequencies, hours of operation, and of power among the several States and communities as to provide a fair, efficient, and equitable distribution of radio service to each of the same.

(47 U.S.C. 307(a)(b), 76 Stat. 58)

Sec. 308: (b) All applications for station licenses, or modifications or renewals thereof, shall set forth such facts as the Commission by regulation may prescribe as to the citizenship, character, and financial, technical, and other qualifications of the applicant to operate the station; the ownership and location of the proposed station and of the stations, if any, with which it is proposed to communicate; the frequencies and the power desired to be used; the hours of the day or other periods of time during which it is proposed to operate the station; the purposes for which the station is to be used; and such other information as it may require. The Commission, at any time after the filing of such original application and during the term of any such license, may require from an applicant or licensee further written statements of fact to enable it to determine whether such original application should be granted or denied or such license revoked. Such application and/or such statement of fact shall be signed by the applicant and/or licensee.

(47 U.S.C. 308(b), 76 Stat. 63)

Sec. 309: (e) If, in the case of any application to which subsection (a) of this section applies, a substantial and material question of fact is presented or the Commission for any reason is unable to make the finding specified in such subsection, it shall formally designate the application for hearing on the ground or reasons then obtaining and shall forthwith notify the applicant and all other known parties in interest of such action and the grounds and reasons therefor, specifying with particularity the matters and things in issue but not including issues or requirements phrased generally. When the Commission has so designated an application for hearing the parties in interest, if any, who are not notified by the Commission of such action may acquire the status of a party to the proceeding

thereon by filing a petition for intervention showing the basis for their interest at any time not less than ten days prior to the date of hearing. Any hearing subsequently held upon such application shall be a full hearing in which the applicant and all other parties in interest shall be permitted to participate. The burden of proceeding with the introduction of evidence and the burden of proof shall be upon the applicant, except that with respect to any issue presented by a petition to deny or a petition to enlarge the issues, such burdens shall be as determined by the Commission.

(47 U.S.C. §309(e), 74 Stat 889)

Sec. 319: (a) No license shall be issued under the authority of this chapter for the operation of any station the construction of which is begun or is continued after this chapter takes effect, unless a permit for its construction has been granted by the Commission. The application for a construction permit shall set forth such facts as the Commission by regulation may prescribe as to the citizenship, character, and the financial, technical, and other ability of the applicant to construct and operate the station, the ownership and location of the proposed station and of the station or stations with which it is proposed to communicate, the frequencies desired to be used, the hours of the day or other periods of time during which it is proposed to operate the station, the purpose for which the station is to be used, the type of transmitting apparatus to be used, the power to be used, the date upon which the station is expected to be completed and in operation, and such other information as the Commission may require. Such application shall be signed by the applicant.

(47 U.S.C. §319(a), 76 Stat. 64)

The Federal Communications Commission
Rules and Regulations

Sec. 0.361: (a) The Review Board is a permanent body with continuing functions. The main function of the Board is to review matters referred to it by the Commission in hearing proceedings. The Board also takes original action on certain interlocutory matters which arise during the course of hearing proceedings. The hearing matters referred to the Board on a regular basis are listed in §0.365. Other hearing matters may be referred to the Board for review on a case by case basis, either at the time of designation for hearing or upon consideration of exceptions. The Commission may, from time to time, assign the Board additional duties not inconsistent with these functions.

(b) Any matter referred to the Board on a regular basis or otherwise may, on its own motion or upon its consideration of the motion of any party, be certified by the Board to the Commission, with a request that the matter be acted upon by the Commission, if in the Board's judgment the matters at issue are of such a nature as to warrant Commission review of any decision which the Board might otherwise have made. If a majority of the members of the Commission then holding office vote to grant the Board's request, the matter shall be acted upon by the Commission.

(c) Whenever the Commission determines that a matter pending before the Board involves a novel or important issue of law or policy, it may, on its own motion, by the vote of a majority of the members then holding office, direct that any matter before the Board be certified to the Commission for decision. However, no petition requesting the Commission to take such action will be entertained.

(47 C.F.R. §0.361)

Sec. 1.115: (2) The application for review shall specify with particularity, from among the following, the factor(s) which warrant Commission consideration of the questions presented:

(i) The action taken pursuant to delegated authority is in conflict with statute, regulation, case precedent, or established Commission policy.

(47 C.F.R. §1.115(b)(2))

Sec. 1.522(b): (b) Requests to amend an application after it has been designated for hearing will be considered only upon written petition properly served upon the parties of record in accordance with §1.47 and, where applicable, compliance with the provisions of §1.525, and will be granted only for good cause shown. In the case of requests to amend the engineering proposal in standard broadcast applications (other than to make changes with respect to the type of equipment specified), good cause will be considered to have been shown only if, in addition to the usual good cause considerations, it is demonstrated that (1) the amendment is necessitated by events which the applicant could

not reasonably have foreseen (e.g., notification of a new foreign station or loss of transmitter site by condemnation); (2) the amendment could not reasonably have been made prior to designation for hearing; and (3) the amendment does not require an enlargement of issues or the addition of new parties to the proceeding.

(47 C.F.R. §1.522(b))

Sec. 73.150(a)(2), (6): (a) The following engineering data shall be submitted with the application for authority to install

(2) Calculated horizontal (ground) plane field intensity patterns for each mode of operation plotted to the largest scale possible on standard letter-size polar coordinate paper (main engraving approximately 7" x 10") using only scale divisions and subdivisions having values of 1, 2, 2.5, or 5 times $10^{n\text{th}}$ and showing:

(i) Inverse field intensity at 1 mile and effective field intensity (RMS).

(ii) Direction true north shall be shown at zero azimuth.

(iii) Direction and distance to each existing station with which interference may be involved. (All directions shall be determined by accurate calculation or from Lambert Conformal Conic Projection

(6) In the event actual inverse distance field intensities expected to be determined in practice (that is, the values determined from actual measurements, particularly in sharp nulls) are different from the calculated values in subparagraphs (2) and (3) of this paragraph, the maximum expected operating values (MEOV) as well as the calculated values shall be shown on both the full patterns and the enlarged sections.

(47 C.F.R. §73.150(a)(2), (6))

BRIEF FOR APPELLEE

IN THE UNITED STATES COURT OF APPEALS
FOR THE DISTRICT OF COLUMBIA CIRCUIT

No. 23,421

H. H. HUNTLEY,
Appellant.

v.

FEDERAL COMMUNICATIONS COMMISSION,
Appellee,
COSMOPOLITAN ENTERPRISES, INC.,
Intervenor.

ON APPEAL FROM DECISIONS OF THE
FEDERAL COMMUNICATIONS COMMISSION

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IN THE UNITED STATES COURT OF APPEALS
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No. 23,421

H. H. HUNTLEY,
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v.

FEDERAL COMMUNICATIONS COMMISSION,
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COSMOPOLITAN ENTERPRISES, INC.,
Intervenor.

ON APPEAL FROM DECISIONS OF THE
FEDERAL COMMUNICATIONS COMMISSION

BRIEF FOR APPELLEE

QUESTIONS PRESENTED*

1. Whether the Review Board in finding Cosmopolitan technically qualified acted within the bounds of administrative fairness.
2. Whether the record supports the Board's conclusion that a grant of the Cosmopolitan application would better achieve the objectives of Section 307(b) of the Act.

* This case has not previously been before this Court.

COUNTERSTATEMENT OF THE CASE

Appellant, H. H. Huntley, appeals from a decision of the Review Board of the Federal Communications Commission, 15 F.C.C. 2d 650, which granted intervenor Cosmopolitan Enterprises, Inc., a permit to construct and operate a first local standard broadcast (AM) station at Edna, Texas, and denied Huntley's mutually exclusive application for Yoakum, Texas. On July 23, 1969, the Commission denied review (A.129) of the Review Board's decision.

The two applicants, Huntley and Cosmopolitan, sought a construction permit for a new broadcast station to operate daytime only with a directional antenna on the frequency 1130 kilohertz with 10 kilowatts of power at Yoakum and Edna, Texas, respectively.^{1/} These mutually exclusive applications were designated for hearing on April 11, 1966 to determine principally whether the applicants' directional antenna systems could be adjusted and maintained so as not to cause interference to the co-channel operation of station KWKH, Shreveport, Louisiana,^{2/} to determine the

1/ Under Section 5(d)(3) of the Communications Act of 1934, as amended, 47 U.S.C. 155(d)(3), in the absence of review by the Commission, a decision of the Review Board has the same force and effect as a decision of the Commission.

2/ Edna and Yoakum are located in southeastern Texas, approximately 35 miles apart.

3/ KWKH intervened in the proceeding before the Commission but did not seek review of the Board's decision, nor is it a party herein.

areas and populations to be served and the availability of other services, and, finally, in light of section 307(b) of the Communications Act of 1934, 47 U.S.C. 307(b), to determine which proposal would better provide a fair, efficient, and equitable distribution of radio services.

After an extensive hearing, the examiner's findings, as modified and supplemented by the Board, were adopted (A. 100). However, the Review Board did not accept the examiner's conclusions looking toward the denial of both applications. Rather it concluded that both applicants' directional antenna systems could be adjusted and maintained so as not to cause interference to the operation of station KWKH, and that the proposal of Cosmopolitan would better achieve the objectives of section 307(b) (A.100).

It is undisputed that the mathematically developed or theoretical radiation patterns proposed by each of the applicants

4/ Section 307(b) states:

In considering applications for licenses, and modifications and renewals thereof, when and insofar as there is demand for the same, the Commission shall make such distribution of licenses, frequencies, hours of operation, and of power among the several States and communities as to provide a fair, efficient, and equitable distribution of radio service to each of the same.

5/ The examiner had found neither applicant was technically qualified since, in his view, each had failed to carry the burden of proof that its directional antenna system could be maintained as proposed (A. 97). "This is not to say," he added, however, "that the opposite is true" (A. 97). In its Proposed Conclusions, at page 40, the Commission's Broadcast Bureau took the contrary position that both Cosmopolitan and Huntley could effectuate their proposals.

6/ will not cause objectionable interference to KWKH. The only question here is whether expected deviations from the calculated theoretical radiation pattern caused by such factors as terrain, weather conditions, reradiation or reflection from objects external to the array, can be sufficiently controlled so as to avoid interference with KWKH.

As part of their evidentiary showing, each of the applicants submitted evaluations based on his engineer's judgment as to maximum expected operating values (MEOVs) in the direction critical to protection of KWKH from interference. In effect, the MEOVs represent the engineer's judgment, based upon his experience, of the level of radiation that will not be exceeded over the theoretical radiation pattern in the day-to-day operation of the station. See section 73.150(a)(6), 7/ and Further Notice of Proposed Rule Making, 34 F.R. 18942 (1969). 8/ Otherwise stated, the

6/ As a class I-B station, KWKH is entitled to protection from objectionable interference to its 0.1 mv/m contour from stations operating on the same channel. See section 73.37, 47 CFR 73.37.

7/ Section 73.150(a)(6), 47 CFR 73.150(a)(6), states:

In the event actual inverse distance field intensities expected to be determined in practice (that is, the values determined from actual measurements, particularly in sharp nulls) are different from the calculated values in subparagraphs (2) and (3) of this paragraph, the maximum expected operating values (MEOV) as well as the calculated values shall be shown on both the full patterns and the enlarged sections.

8/ This rule making proceeding is addressed to the question of whether more standard methods for calculating radiation variance from the theoretical can be established.

purpose of MEOVs is to allow some safety factor in pattern design by providing for variables not contemplated in the mathematical expressions for the array.

Cosmopolitan's showing indicated that its MEOVs were substantially under the level that would cause objectionable interference to KWKH, and that there was a considerable additional tolerance available even after numerous assumed variations. There is no dispute on appeal about this evidence. There was a question, however, as to whether Cosmopolitan's phase monitoring system was sufficiently accurate to maintain the radiation values proposed by Cosmopolitan in the critical areas (A. 100-103). Nonetheless, as the Review Board observed, "the fact that Cosmopolitan has such a large leeway before radiation in excess of its MEOVs would cause interference to KWKH presents a unique situation which, viewed in light of the Bureau's comments and the existence of monitoring equipment having the necessary accuracy, persuades us that Cosmopolitan's inability to show that it can maintain the operation within its MEOVs should not, in the circumstances of this case, be held disqualifying" (A.102). The Board then conditioned its grant to Cosmopolitan upon the installation of a monitoring system which will "be adequate to demonstrate that the array is maintained during day-to-day operation within the maximum expected operating values"

indicated in the Board's authorization (A. 103). ^{9/}

In addressing itself to the 307(b) aspects of the proceeding, the Board noted that consideration of the two proposed communities raises a "close and difficult" question. It found, however, that there were "sufficient differences" to permit a meaningful 307(b) choice (A. 105). While the Board observed that neither Cosmopolitan's community of Edna, Texas, nor Huntley's community of Yoakum, Texas, has an AM, FM or TV station, and that they are of approximately the same size, "the political and governmental importance of Edna surpasses that of Yoakum" (A. 105). The Board pointed out that this takes on added weight when considered in light of the growth rate of the two communities. The statistics indicated, the Board found, that Edna, the seat of a county without a broadcast station, was a growing community while Yoakum, located partially in a county with a broadcast facility, was neither a governmental seat nor did it appear to be growing at the same pace as Edna (A. 105). Based on the foregoing, the Board concluded that Edna has a greater need than Yoakum for a first standard broadcast station (A. 105).

Appellant sought but was denied Commission review of the Board's decision. This appeal followed.

^{9/} The Board also resolved favorably to Huntley the issues looking toward the protection of KWKH (A. 100-102).

ARGUMENT

I. THE REVIEW BOARD DID NOT ABUSE ITS DISCRETION IN CONCLUDING THAT COSMOPOLITAN'S PROPOSAL WOULD PROVIDE ADEQUATE PROTECTION TO KWKH.

The principal issue in this case involves a highly technical area in which the Commission is entitled to great discretion. See Interstate Broadcasting Company v. F.C.C., 105 U.S. App. D.C. 224, 265 F.2d 598 (1959). Appellant Huntley's prime assertion (Br. pp. 9-21) is that the Review Board abused this discretion in the procedure it used to find intervenor Cosmopolitan technically qualified. Huntley's argument is premised on his theory that the question of whether Cosmopolitan can adjust and maintain its proposed directional antenna system is separate and apart from the question of whether its proposal will provide adequate protection to KWKH. He also contends that in deciding the issue concerning the stability of Cosmopolitan's proposed array, the Communications Act and the Commission's rules required the Board to consider nothing other than the data submitted by Cosmopolitan in its application. According to Huntley, the Board's specification sua sponte of new operating maxima for Cosmopolitan amounted to an improper amendment of Cosmopolitan's application. Finally, Huntley argues that the Board's specification of this allegedly

new data, without prior notice that it intended to proceed in this manner, denied him his right of rebuttal and violated his procedural right to a full and fair hearing. We will show below that each of these contentions lacks merit.

A. Huntley's Premise That The Designated Issue With Regard To Maintenance Of Cosmopolitan's Antenna System Is An Isolated Issue Separate From The Question Of Whether Adequate Protection Will Be Afforded To KWKH Is Incorrect.

As the Commission made clear in its order of designation, the significance of Issue 2 in this proceeding, seeking a determination of whether the applicants can adjust and maintain their proposed directional antenna systems, lies in terms of issue 3, seeking a determination "in light of the evidence adduced" under issue 2, of whether adequate protection can be afforded to station KWKH.

It stated (A. 72):

To each of the numerous amendments to the application tendered by H. H. Huntley, KWKH has objected on the same grounds of their objections to the Cosmopolitan proposal, namely that the proposed 0.005 mv/m contours would fall relatively close to the KWKH normally protected 0.1 mv/m contour on the basis of the proposed MEOV's; that each applicant proposes to suppress the proposed 10 kilowatts of power to critically low values in the general direction of KWKH (Cosmopolitan and Huntley propose MEOV's as low as 8.9 and 10.3 mv/m, respectively, for 10kw of power); that minor variations in the

operating parameters of each proposal would cause the proposed MEOV's to be exceeded. Since studies of these proposals indicate that protection to KWKH is critical and in view of the degree of signal suppression proposed, the Commission feels that a substantial question exists as to whether the applicants will be able to adjust and maintain the antenna systems as proposed, and whether adequate protection will be afforded KWKH.

Thus, it is clear that the question here is not, as Huntley contends, only whether Cosmopolitan will be able to adjust and maintain its proposed directional antenna system, but whether it can do so in a manner which will afford protection to KWKH. The latter is the gravamen of this case.

B. The Review Board Was Not Restricted In Resolving Related Issues 2 And 3 To A Consideration Of Cosmopolitan's Application.

As we pointed out in our Counterstatement, the Commission's MEOV rule, Section 73.150(a)(6), requires that an applicant submit, when pertinent, an evaluation based on the judgment of its engineer as to how he thinks the station's radiation pattern will vary in actual operation from the theoretical, mathematically computed radiation pattern or array proposed by the applicant. Cosmopolitan's application did contain the required MEOVs upon the basis of which the Review Board found that Cosmopolitan would not cause interference

to KWKH. However, the Board found that in certain critical areas (those where the proposed directional pattern was pulled in to protect KWKH), Cosmopolitan's MEOVs would be technically difficult to maintain employing the monitoring equipment it proposed. The Board pointed out, however, that this case presented a unique situation since there is a large leeway before radiation in excess of Cosmopolitan's MEOVs will cause any interference to KWKH. The Board found that while Cosmopolitan's MEOVs would be slightly higher than the applicant's estimates, the evidence (Cosmopolitan Exhibit E, pg. 19, A. 148) established that the proposal would not result in interference to KWKH. Accordingly, it granted Cosmopolitan's application conditioned upon the installation of a ^{10/} monitoring system having the necessary accuracy to insure

10/ The evidence of record establishes that monitoring equipment of the necessary accuracy is available (Initial Decision, para. 39, A. 90). Both Cosmopolitan and Huntley propose to use the same make and type of phase monitor (Nems Clarke type 112), having a resolution capability of one-half of a degree (0.5°) in phase and one-half of one percent (0.5%) in current magnitude. The addition of a suitable digital voltmeter, as proposed by Huntley, increases the resolution of the monitor to one-tenth of a degree (0.1°) in phase and one-tenth of one percent (0.1%) in current magnitude. The requirement that a properly designed phase monitor shall be installed has been specified as a condition of grant in other Commission authorizations. E.g., WHOO Radio, Inc. (WHOO), 4 F.C.C. 2d 437 (1966); Radio Nevada, 15 F.C.C. 2d 324 (1968). Depending upon the availability of the data on which the condition is based, such conditions may appear in a designation order, in an Initial Decision, or, as here, in a Decision.

11/

continued protection to KWKH.

We stress that based on Cosmopolitan's proposed MEOVs, no interference will result to KWKH. Nor will interference result under the MEOVs as specified by the Board. Essentially, this distinguishes this proceeding from Edina Corporation, 24 Pike and Fischer, R.R. 436 (1962), and Beacon Broadcasting Systems, Inc., 21 Pike and Fischer, R.R. 659 (1961), relied upon by appellant (Br. pp. 15-16), for in those cases the required alteration of the MEOVs would have caused interference.

Appellant complains that the Board's action constituted an amendment of Cosmopolitan's application. Contrary to appellant's assertion (Br. 17-78), the Review Board is not rigidly confined to grant an application as submitted. This argument was rejected twenty years ago in Plains Radio Broadcasting Co. v. F.C.C., 85 U.S. App. D.C. 48, 50, 175 F.2d 359, 361 (1949), when this Court stated

11/ It is pointed out that after Cosmopolitan's station has been constructed and before it is licensed, Cosmopolitan will be required to show that it will be able to operate in accordance with the terms of its construction permit. It must submit a study showing that it can maintain the MEOVs specified in its radiation pattern. Thus, KWKH, the station concerning which the Commission formulated its interference issue, continues to be protected in that it has every right at the time Cosmopolitan makes its submission to challenge the conclusions set forth therein. The burden is then squarely on Cosmopolitan to show that its field strength can be maintained within the specified MEOVs of radiation. If it cannot, it will not be licensed. (See A. 106-107).

that as long as the grant is "within the ambit of the issues and the evidence," the Commission can grant facilities which are "reasonably related" to those requested. See also WREC v. Federal Radio Commission, 62 App. D.C. 312, 67 F.2d 578 (1933); Woodmen of the World Life Ins. Soc. v. F.C.C., 70 App. D.C. 196, 105 F.2d 75 (1939). This is particularly true in the instant case where the Board used its expertise in resolving a highly technical engineering question. See NBC v. F.C.C., 124 U.S. App. D.C. 116, 128, 362 F.2d 946, 958 (1966); Triangle Publications, Inc. v. F.C.C., 110 U.S. App. D.C. 214, 216-17, 291 F.2d 342, 344-45 (1961).

But the short answer to appellant's argument is that the Board's action did not result in a change in Cosmopolitan's proposal. KWKH remains adequately protected. Neither Cosmopolitan's parameters nor its coverage have been changed. See Circle L. Inc., 9 Pike & Fischer, R.R. 2d 854 (1967), and South Central Broadcasting Corp., 16 F.C.C. 561, 566-567 (1952).

C. Appellant's Procedural Rights Have Not Been Violated.

Huntley complains that the Board's action, effectively amending Cosmopolitan's application, resulted in a derogation of his procedural rights. While we submit that the Board did not substantially change Cosmopolitan's proposal, this entire question

becomes important, in the context of Huntley's argument, only if the changes made resulted in some demonstrable prejudice to his application. Cf. Selma Television, Inc., 7 F.C.C. 2d 995 (1967); Rice Capital Broadcasting Co., 7 F.C.C. 2d 899 (1967). For, with regard to amendments of applications, this Court has held that the Commission is not "a prisoner of its own rule," and may allow amendments at any stage in the proceeding if necessary to the making of an adequate record. Wyszatycki v. F.C.C., 105 U.S. App. ^{12/} D.C. 399, 267 F.2d 676 (1959). In point of fact nowhere in his brief does Huntley contest the validity of the data adopted by the Board or its conclusion that Cosmopolitan will adequately protect KWKH. And, as indicated above, neither ^{13/} Cosmopolitan's design parameters nor its coverage has been changed. See Circle L, Inc.,

^{12/} Although it is not significant to the resolution of this case, we submit that Huntley's "waiver argument" (Br. p. 15) is based on an incorrect understanding of the law. The Commission's, and therefore the Review Board's, power to waive a Commission rule is broad and would clearly cover the situation posed by appellant. See 47 CFR 0.361, 0.365, 1.291(a)(2) and 0.161, and United States v. Storer Broadcasting Co., 351 U.S. 192 (1956).

^{13/} The correctness of the Board's resolution of the interference issue would appear to be pointed up by KWKH's decision not to seek Commission review of the Board's action and its decision not to participate in this appeal.

9 Pike & Fischer, R.R. 2d 854 (1967), and South Central Broadcasting Corp., 16 F.C.C. 561, 566-567 (1952).

Thus, not only is it evident that Cosmopolitan's proposal as granted is in no significant respect different from its application, but the procedures followed here did not, as Huntley claims, prejudice his procedural rights in failing to provide him with an opportunity for rebuttal. Cosmopolitan's Exhibit E, at page 19 (A. 148), sets forth the allowable fields which Cosmopolitan can attain without causing interference to KWKH. ^{14/} Huntley had every opportunity to cross-examine on this matter (see Tr. 32-99) and to urge the adoption of his assessment of what the evidence demonstrated. Significantly he does not argue, even now, that Cosmopolitan's Exhibit E is in error. In addition, the question of a safety margin above the MEOVs was discussed by Cosmopolitan in its exceptions and supporting brief filed with the Review Board, to which Huntley made reply. Similarly, as discussed above, the specification that monitoring equipment of a stated accuracy

^{14/} For the Court's convenience, Appendix A has been prepared which sets forth the azimuths critical to the protection of KWKH, the outside limits of radiation that Cosmopolitan can transmit without causing interference to KWKH, and the maxima radiation values which the Review Board has held Cosmopolitan may not exceed. This Appendix also shows the source, in the record, of this data.

be utilized by Cosmopolitan was based on record evidence of its availability.

In this context, what petitioner has asserted is a sterile claim at best, showing no basis for setting aside the order on review. ^{15/} In language that would appear to be pertinent here, the Supreme Court stated in Market Street Ry. v. Railroad Commission 324 U.S. 548 at 561-562:

No contention is made here that the information was erroneous or was misunderstood by the Commission, and no contention is made that the Company could have disproved it or explained away its effect for the purpose for which the Commission used it. . . . It does not appear that the Company was in any way prejudiced thereby, and it makes no showing that, if a rehearing were held to introduce its own reports, it would gain much by cross-examination, rebuttal, or impeachment of its own auditors or the reports they had filed. Due process, of course, requires that commissions proceed upon matters in evidence and that parties have opportunity to subject evidence to the test of cross-examination and rebuttal. But due process deals with matters of substance and is not to be trivialized by formal objections that have no substantial bearing on the ultimate rights of parties.

^{15/} If Huntley believed that the Board had improperly relied on a material fact not of record, he should have pursued his statutory opportunity to show the contrary. See Administrative Procedure and Judicial Review Act, Section 556(e), 5 U.S.C. 556(e).

II. THE RECORD SUPPORTS THE BOARD'S CONCLUSION THAT A GRANT OF THE COSMOPOLITAN APPLICATION WOULD BETTER ACHIEVE THE OBJECTIVES OF SECTION 307(b) OF THE ACT.

Appellant argues (Br. pp. 22-25) that the Review Board improperly assessed its findings when it awarded a 307(b) preference to Edna rather than Yoakum. First, Huntley claims the Board erred in considering the importance of the communities to their surrounding areas; he appears to argue that the Board should have confined its assessment to a comparison of Yoakum's population with that of Edna and a determination of the number of broadcast facilities in each community. Second, Huntley argues that the Board's reliance on Edna's status as a county seat is without precedent.

Essentially, appellant has misstated not only the Board's holding but the facts upon which the Board based its holding. The Review Board pointed out that Edna is a county seat of a county without any broadcast stations, that Yoakum is not a county seat and, moreover, that one of the two counties in which it is located already has a radio outlet. Based upon these facts, the Board concluded that Edna's political and governmental importance is more substantial than that of Yoakum. As the Board observed,

although Yoakum (pop. 5761) is somewhat larger than Edna (pop. 5038), Edna is growing at a faster pace than Yoakum. Edna's population has increased 30% from 1950 to 1960, while Yoakum's has increased only 10% in the same period (A. 105). Additionally, the Board found that Jackson County of which Edna is the county seat has shown a 10% growth in population in the past ten years, while the population of DeWitt and Lavaca Counties in which Yoakum is located decreased about 9% during the same period. As the Board concluded, "Although it is service to existing population with which the Commission must be primarily concerned, these statistics cannot be disregarded since they tend to substantiate our appraisal of the relative importance of the two communities in the areas they will serve. Cf. Holmes Broadcasting, Inc., 10 FCC 2d 781, 11 R.R. 2d 930 (1967)."

Further, as appellant concedes (Br. p. 23), there are instances when the Board has considered the relative importance of a community to its surrounding area in making a 307(b) determination. Although the Board's decision here would appear to be well within the standards of Kent-Ravenna Broadcasting Co., 22 Pike & Fischer, R.R. 605, 611 (1961), where the Commission said that it was "primarily" interested when selecting a community for a broadcast facility in the number of broadcast outlets already in the community and its

population, its conclusions also appear appropriate in light of Radio Haddenfield, Inc., 37 F.C.C. 168 (1964), and Five Cities Broadcasting Co., 35 F.C.C. 501 (1963). In these cases, the Board held that the importance of communities to their surrounding areas may be substantial and of decisive significance. Additionally, in Five Cities Broadcasting Co., 35 F.C.C. at 504, the Board held that the relative significance of a community includes its governmental attributes.

In light of the foregoing, it appears clear that the record supports the Board's award of a 307(b) preference to Cosmopolitan. As the Board stated, the facts of this case "raise a close and difficult 307(b) question" but there were "sufficient differences between the two proposals to permit a meaningful 307(b) choice." (A. 105)

CONCLUSION

In the final section of his brief (pp. 26-30), appellant contends that the Commission's failure to grant review of the Board's action in this proceeding was arbitrary, capricious, and an abuse of discretion because, in his view, the Board had exceeded its delegated authority and had established new policy with regard to both Cosmopolitan's technical qualifications and its 307(b) determination. By denying its petition for review, the Commission clearly signified that it disagreed.

As we have shown above in Parts I and II, however, appellant's basic premises are erroneous. Looking at the proceeding as a whole, rather than considering each issue in a vacuum, as appellant would have it, and based upon the evidence of record presented at a full hearing, the Board properly concluded that both Cosmopolitan and Huntley were technically qualified and would provide adequate protection to station KWKH. The potentially disqualifying issues having been resolved favorably to both applicants, the Board then proceeded to consider which community had the greater need for a first broadcast service. Based upon growth figures and upon Edna's political and governmental importance as its county's seat, the Board determined that a grant to Edna would better achieve the objectives of Section 307(b) of the Act. This determination is entirely consistent with precedent and demonstrates a reasonable balancing and weighing of the various differences between the two proposals. In light of the above, the Commission properly determined that there was no question warranting its review.

- 20 -

For the foregoing reasons, the Commission's orders should be affirmed.

Respectfully submitted,

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Federal Communications Commission
Washington, D. C. 20554

December 19, 1969.

APPENDIX A

The Review Board provided the following inverse distance fields on the indicated critical azimuths to protect KWKH:

<u>Azimuths Critical To KWKH</u>	<u>Allowable Field 1</u>	<u>Values Contained In Grant Which Are Not To Be Exceeded By Cosmopolitan 2</u>
346°	21.7	17.0 mv/m
356°	20.	*16.4 mv/m
6°	30.3	*12.5 mv/m
16°	43.5	*15.7 mv/m
26°	45.5	*20.7 mv/m
36°	35.7	17.5 mv/m
46°	57.5	15.0 mv/m
56°	73.5	20.5 mv/m
56°	56.0	19.0 mv/m

¹ The allowable fields are the outside limit of radiation that Cosmopolitan could transmit without causing interference to KWKH. They are found in Exhibit E, p. 19 (A. 148).

² This column represents values which Cosmopolitan must maintain to protect KWKH. Those values with an asterisk represent the maximum operational values based on radiation variations of 1% and 1° center tower parameters found in Exhibit E, p. 19. All the other values in the column represent MEOVs submitted in Cosmopolitan's application which is reproduced in Exhibit E-2 (A. 164).

BRIEF FOR INTERVENOR

IN THE

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Appellee,

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Intervenor.

On Appeal from Decisions of the
Federal Communications Commission

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FILED FEB 24 1970

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* Cases and other authorities chiefly relied upon are marked by an asterisk.

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BRIEF FOR INTERVENOR

QUESTIONS PRESENTED

1. Whether the Review Board properly found Cosmopolitan to be technically qualified.
2. Whether the Review Board acted reasonably in determining that grant of Cosmopolitan's application would better achieve the objectives of Section 307(b) of the Act.

COUNTERSTATEMENT OF THE CASE

This is an appeal by H. H. Huntley from a Decision of the Review Board of the Federal Communications Commission, 15 FCC 2d 650, released December 17, 1968, granting Cosmopolitan Enterprises, Inc.'s application for an AM construction permit at Edna, Texas and denying Huntley's mutually exclusive application for Yoakum, Texas. On July 23, 1969, the Commission unanimously denied review (A. 129) of the Review Board's Decision.

This proceeding dates back to 1964 when Cosmopolitan and Huntley each applied for an AM authorization on 1130 khz in southeastern Texas. The licensee of co-channel Station KWKH, Shreveport, Louisiana, opposed both proposals on the ground of potential interference to its existing operation. The Commission thereupon set this matter for hearing, among other things, on engineering issues, questioning whether each applicant could adjust and maintain its proposed antenna system so as to hold KWKH harmless from interference. In the Commission's words (A. 73):

"Since studies of these proposals [the applications of Cosmopolitan and Huntley] indicate that protection to KWKH is critical . . . the Commission feels that a substantial question exists as to whether the applicants will be able to adjust and maintain the antenna systems as proposed, and whether adequate protection will be afforded KWKH."

Huntley did not challenge the proposition that the purpose of inquiry into the stability of the arrays was to insulate KWKH from interference. That is, at no time prior to the Review Board's adverse Decision did Huntley contend below, as it does here, that the array stability issue had any vitality apart from assuring that KWKH is shielded from interference.

KWKH, which had sought specification of the array maintenance issue, also recognized that the issue had meaning only in the context of protecting the Station from interference from either proposal. Thus, in February 1969, in *KWKH's Comments Re "Application For Review"*, it observed (par. 2):

"After Cosmopolitan's station is built it will be up to that party to do whatever is necessary to make sure there is no interference to KWKH. It is our view that, from a financial standpoint Cosmopolitan is to be preferred over Huntley as the prevailing applicant. This is so because Cosmopolitan is better able to undertake the risk involved in building the Station and then taking corrective action to protect KWKH . . . "

Aside from expressing its self-interested view that the stability issue was designed to protect its operation — which best could be vouchsafed by a grant to Cosmopolitan — KWKH voiced no preference between the applicants. The Review Board for its part did not favor either applicant on technical grounds. It merely concluded, in the exercise of its judgment, that neither applicant would cause interference to KWKH.

The Board, however, distinguished between the applicants on the basis of Section 307(b) of the Communications Act of 1934. Although the Board concluded that a selection on this ground could not lightly be made, it found "sufficient difference between the two proposals to permit a meaningful 307(b) choice". In keeping with precedent, it accorded decisional significance to the consideration that Edna "is the county seat of a county without any broadcast stations" — AM, FM or TV — while Yoakum is a secondary city in DeWitt County (one of the two counties in which it is located); and there is a radio station in Cuero,¹ the county seat. The Review Board further noted that Edna is growing at an appreciably more rapid rate than Yoakum; and Jackson County, of which Edna is the county seat, is increasing in population, while each of Yoakum's counties is suffering population loss.²

¹ Cuero, the largest city, as well as the governmental center of DeWitt County, lies sixteen (16) miles southwest of Yoakum. Yoakum is 35 miles from Edna (H.H.H. Ex. 1, Fig. 0-4).

² Cf. From 1962-1966, Edna's school population increased while Yoakum's decreased. (Edna Ex. 1, par. 3; Tr. 172-177, 190)

	<u>Edna</u>	<u>Yoakum</u>
1962-1963	1769	1451
1963-1964	1886	1436
1965-1966	2058	1439

The Board concluded that Edna had the greater need for a local transmission facility. It therefore awarded the permit to Cosmopolitan in preference to Huntley. (A. 99-110).

Huntley then sought Commission review of the Review Board Decision. Without dissent, the Commission upheld the *Decision* – by denying review (A. 129).

ARGUMENT

I. THE REVIEW BOARD PROPERLY CONCLUDED THAT INTERVENOR'S OPERATION WOULD NOT CAUSE INTERFERENCE TO KWKH

The gravamen of Huntley's argument on appeal is that the Decision below deprived him of a fair hearing. As the Commission concisely observed in its Brief (p. 7), Huntley's argument

"is premised on his theory that the question of whether Cosmopolitan can adjust and maintain its proposed directional antenna system is separate and apart from the question of whether its proposal will provide adequate protection to KWKH."

The Commission decisively disposed of this contention in its Brief. Since repetition is idle, Cosmopolitan relies upon the Commission's legal presentation on this score. In addition, Cosmopolitan calls the Court's attention to the following recital establishing that Huntley's contention about a fair hearing constitutes argumentative afterthought and is not reflective of his position during the hearing and prior to the Review Board's Decision. Indeed, as Cosmopolitan emphasized in its Counterstatement, until the adverse Decision was released, Huntley never questioned: (i) that the ultimate technical question was ". . . certitude on the subject of protection to Station KWKH" (Huntley *Petition For Extraordinary Relief*, dated September 22, 1967 (par 5)), and (ii) that the antenna maintenance issue was telescoped into that bedrock issue.

Huntley adhered to that position to the end. Accordingly, at oral argument before the Review Board he maintained that the controlling consideration in cases involving an array stability issue was not MEOV excess, a mere indicator of possible interference, but the substance of interference. (Tr. 521). Thus, when, under questioning, Huntley was compelled to concede with respect to his proposal (Tr. 529) —

“on 2 degrees if we vary 1 percent in .6 of a degree, MEOV would be exceeded by 2.6”

— he rejoined that no interference to KWKH would result (Tr. 529-530).³

In short, until the Review Board preferred Cosmopolitan to Huntley on 307(b) grounds, the latter accepted that the array stability and KWKH interference issues were symbiotic. He cannot now properly complain of Review Board concurrence.

Likewise, Huntley cannot properly complain of the Review Board's specification of new MEOVs for Cosmopolitan incident to finding it technically qualified. Not only has Huntley failed to show injury therefrom but, at an earlier stage in this proceeding Huntley disclaimed the decisional significance of MEOVs. Thus, immediately prior to the commencement of the hearing below but after the applicants had exchanged technical exhibits, Huntley amended his MEOVs upon a showing that such revision had no impact upon the question of interference to KWKH. (HHH Application Exhibit E-1B, Page 1 amended, dated June 23, 1966. *Order*, FCC 66 M-979, released July 15, 1960).

The Review Board accordingly acted properly and even-handedly in finding Cosmopolitan technically qualified. It applied the same standards to both Cosmopolitan and Huntley in finding each applicant qualified engineering-wise, and

³ Subsequently, Appellant admitted that his proposal conceivably might overlap *i.e.*, actually interfere with KWKH under certain conditions, although Appellant contended that the interference would be suppressed (Tr. 561-562).

this parity of treatment worked no injury on Huntley — other than exposing his application to competitive evaluation with Cosmopolitan's proposal.

II. THE REVIEW BOARD REASONABLY DETERMINED THAT GRANT OF INTERVENOR'S PROPOSAL WOULD BETTER ACHIEVE THE OBJECTIVES OF SECTION 307(b) OF THE ACT

It is axiomatic that an expert agency such as the Commission enjoys broad discretion in construing and applying its statutory mandate. *United States v. Storer Broadcasting Co.*, 351 U.S. 192, 203 (1956). Courts traditionally do not interfere with agency conclusions provided that they have reasonable support in the record. Here the Review Board's Decision not only has reasonable record support but it also is right. The award to Cosmopolitan animates basic purposes of Section 307(b).

The Commission's Brief points up the correctness of the Review Board's Decision. It was a carefully reasoned determination which accorded appropriate recognition to the principle that, in allocating broadcast facilities, government needs should be accorded due weight. For this reason, the Commission regularly has awarded a 307(b) preference to county seats and like governmental centers. Thus both precedent and public policy support a preference to Edna, a growing county seat of a growing county without any local transmission facility. *Holmes Broadcasting, Inc.*, 10 FCC 2d 781 (1967); *Radio Haddonfield, Inc.*, 37 FCC 168 (1964).

CONCLUSION

In view of the correctness of the Review Board's Decision, the Commission properly declined to review the Decision and thus upheld it. For the

reasons set forth herein and in the Commission's Brief, this Court likewise should uphold the actions below.

Respectfully submitted,

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REPLY BRIEF FOR APPELLANT, H. H. HUNTLEY

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FILED FEB 13 1970

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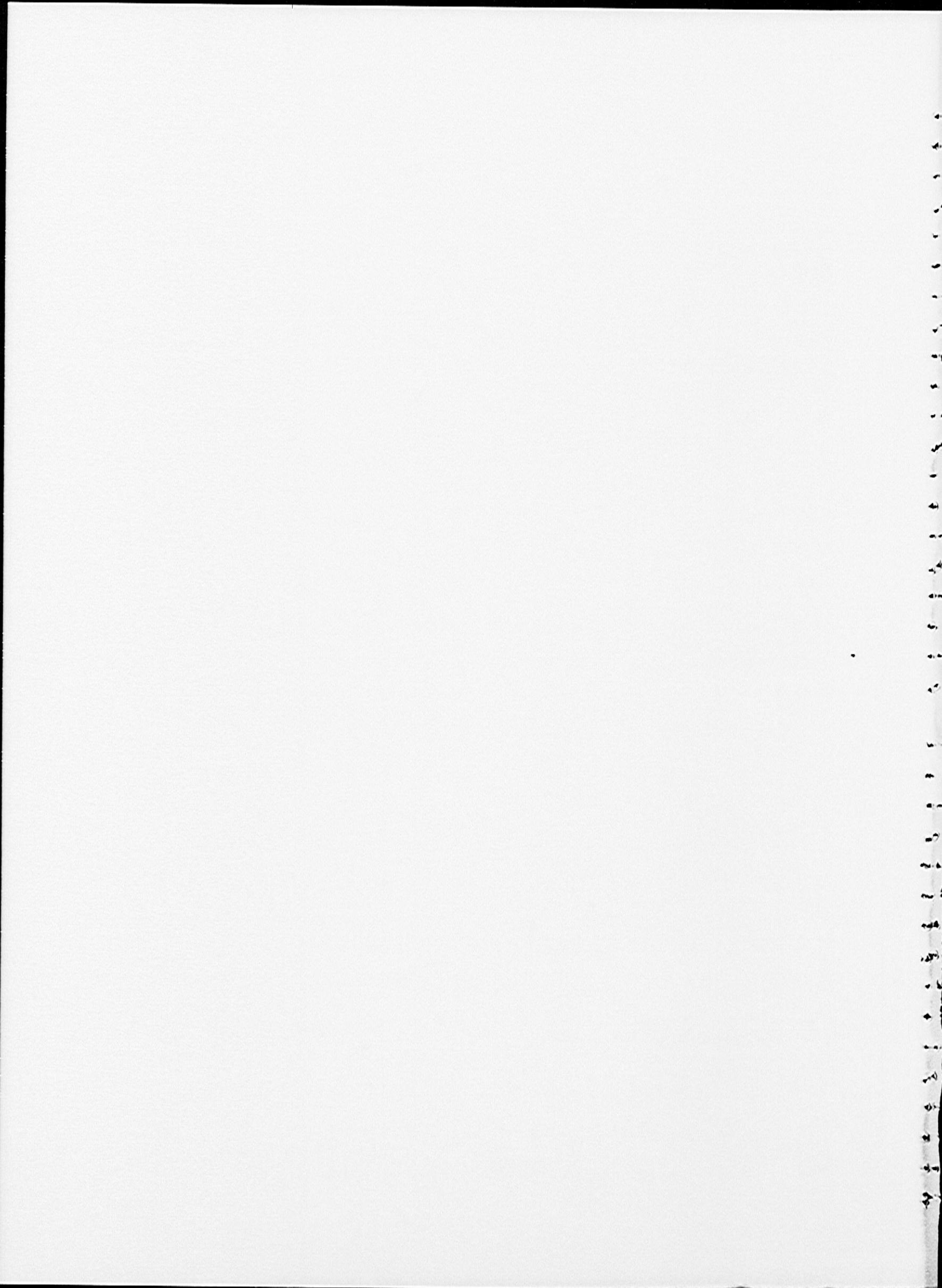
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REPLY BRIEF FOR APPELLANT, H. H. HUNTLEY

SUMMARY OF ARGUMENT

The Commission's and Cosmopolitan's briefs are not responsive to the argument made by H. H. Huntley. What is involved here is not ". . . a highly technical area in which the Commission is entitled to great discretion" (B. p. 7)

or the assertion of "a sterile claim, at best." (B. p. 15). The gravamen of Huntley's appeal, that he was denied due process of law, focuses on a viable and meritorious issue which this Court is eminently qualified to hear. The scope of the review requested is for this Court to determine whether the Commission has abused its authority, violated procedural safeguards and denied Huntley due process when its Review Board, on its own motion, amended Cosmopolitan's application and thereupon found it qualified to be a licensee.

It is Huntley's contention that this denied him due process since, *inter alia*, he did not have the opportunity to be heard. The effect of the Review Board's action is not *de minimus* but proved to be of decisional significance in finding Cosmopolitan qualified to be a licensee. But for the Board's *sua sponte* amendment, Cosmopolitan could not have been found technically qualified, because it had been shown that Cosmopolitan could not adjust and maintain its directional antenna system as it proposed.

The Commission and Cosmopolitan have attempted to limit the scope of this review by arguing that the antenna adjustment and maintenance issue is fused with the KWKH interference issue. They contend that since the new operating maximum specified for Cosmopolitan by the Review Board did not cause objectionable interference to KWKH, then Huntley's rights are not prejudiced. They further argue that this Court must give the Commission wide discretion because this proceeding involves an area which is within the technical province of the Commission's administrative expertise. These contentions lack merit.

ARGUMENT

I. THE REVIEW BOARD ACTED CONTRARY TO STATUTE AND REGULATION WHEN IT FOUND COSMOPOLITAN QUALIFIED TO BE A LICENSEE.

For the Commission and Cosmopolitan to argue that the effect of the Review Board's amendment is of no significance, because the amended

Maximum Expected Operating Values (MEOV) assigned to Cosmopolitan also afforded protection to KWKH, fails to rebut Huntley's showing that under the Commission's Rules and Regulations Cosmopolitan was not qualified to be a licensee. It is circular reasoning which argues that, since the amended MEOV assigned by the Review Board do not cause objectionable interference to KWKH, Cosmopolitan is, therefore, qualified to be a licensee. Those MEOV are *ex parte* determinations not contemplated by the issues in the hearing.

Section 73.150(a)(6), 47 C.F.R. Section 73.150(a)(6) of the Commission's Rules and Regulations requires that an applicant has the sole burden of proposing MEOV. Where a proof of performance indicates that the radiation will exceed MEOV, a license cannot be issued. This principle clearly was stated in *Edina Corp.*, 24 Pike & Fischer RR 436 (1962). The Commission's attempt (B. p. 11) to distinguish this case is ineffectual. In *Edina*, the interference question was an allegation which the Review Board rejected. The Board specifically said (p. 437):

"KRLD does not claim that Edina's operation, if authorized as proposed, will cause interference to KRLD."

Accordingly, the *Edina* principle remains apposite here. The demonstrated failure of Cosmopolitan to prove that it can maintain the radiation of a directional antenna within MEOV which it proposed is a fatal defect which renders Cosmopolitan technically unqualified to be a licensee.

In his brief, Huntley showed that the Commission's Rules and Regulations and decisional precedents had been contravened when the Review Board substituted new MEOV for Cosmopolitan after the hearing had been held and the record closed. The Commission's response is that the ". . . Review Board is not rigidly confined to grant an application as submitted." (B. p. 11). For support of this proposition, the Commission cites *Plains Radio Broadcasting Co. v. F.C.C.*, 85 U.S. App. D.C. 48, 175 F.2d 359 (1949). This case is pertinent here but not for the reason enunciated by the Commission.

In *Plains*, this Court was confronted, *inter alia*, with an allegation that:

"The Commission granted intervenor a permit for a station with 5 kw power, whereas that application was for a 1 kw station only and all intervenor's evidence related to the less powerful operation and none to the greater."

Though this Court agreed with that contention, it decided that the Commission had remedied this defeat by awarding

"... the permit to Lubbock, but upon the condition that the permittee file an application for 'modification of permit' specifying 5 kw daytime power."

From this it can be seen that *Plains* clearly does not stand for the proposition that a license grant can be based on evidence obtained from outside the application or hearing process.

A careful reading of *Plains* reveals that this Court did say that the Commission can grant facilities which are "reasonably related" to those requested. However, this controlling qualification was added:

"If the Commission's authority is restricted, as it says, to facilities 'reasonably related' to those applied for, it should make findings to bring its conclusion within its authority. *And it must receive evidence upon which to base those findings.*" (Emphasis added) *Plains Radio, supra*, 85 U.S. App. D.C. 48, 50.

Accordingly, in order to make proper findings, the Review Board was required to give Huntley notice and an opportunity to be heard. This Court stated in *Woodmen of the World Life Ins. Soc. v. F. C. C.*, 70 App. D.C. 196, 198, 105 F.2d 75, 78 (1939):

After the first hearing, the Commission granted a permit inconsistent with the application, so as to require towers almost twice as high as those considered in the expert testimony presented on the issue of interference at that time. This should not have been done, but that permit

was subsequently revoked and a new hearing ordered at which WOW was given notice and opportunity to meet the issue arising from 257 foot towers required by the new engineering standards then in effect. WOW was, therefore, not ultimately deprived of a fair hearing.

In the instant proceeding, Huntley was deprived of a fair hearing. The Commission attempts to circumvent this contention by apparently arguing that it is proper of the Board to alter procedural safeguards if it is "... resolving a highly technical engineering question." (B. p. 12) Support for the Commission's untenable proposition cannot be found in *National Broadcasting Co. v. F.C.C.*, 124 U.S.App.D.C. 166, 362 F.2d 946 (1966). What this Court said there is indeed the rule to be followed here:

"... questions of such a highly technical and scientific nature must, after legal and required administrative proceedings, be left to administrative expertise. Congress has vested the Commission with primary jurisdiction to determine questions of this type, and we believe our judicial function is completed when our review establishes that the parties have received their *full legal rights* and the Commission's findings and rulings are neither arbitrary nor capricious." (Emphasis added) *supra*, p. 126.

Of course, "full legal rights" include a hearing and right of rebuttal on all issues. See *Johnston Broadcasting Co. v. F.C.C.*, 85 U.S.App.D.C. 40, 175 F.2d 351 (1949), *Eastern Publishing Co. v. F.C.C.*, 85 U.S.App.D.C. 33, 175 F.2d 344 (1949).

Clearly, the Commission reasonably cannot contend that effect of the Board's *sua sponte* amendment did not prejudice Huntley. On the contrary, the effect of the amendment was to find the previously unqualified Cosmopolitan qualified to be a licensee in preference to Mr. Huntley. This was done *ex parte* by the Review Board by eliminating from consideration the very matter of disqualification without affording Mr. Huntley his right to be heard.

In an attempt to buttress the unauthorized act of the Review Board, the Commission makes the bald assertion that "... this Court has held that the Commission . . . may allow amendments at any stage in the proceeding . . ." (B. p. 13) As authority it cites *Wyszatycki v. F.C.C.*, 105 U.S. App. D.C. 399, 267 F.2d 676 (1959). A reading of the case reveals that this Court did not so hold. Under a unique factual situation, this Court did find that it was proper to allow all parties to have the opportunity to amend their engineering proposals after the Initial Decision was released where the Commission found that further hearing was needed when a decision of this Court, handed down during the course of the hearing, changed the procedure governing Commission treatment of the subject matter in the future. Furthermore, the instant case does not involve an amendment by a party but a unilateral action by the Review Board *sua sponte*.

The Commission attempts to sanction the Board's *sua sponte* amendment with the argument that "Huntley had every opportunity to cross examine on this matter (see Tr. 32-99)" (B. p. 14). Unfortunately, neither reason nor facts substantiate the Commission's contention. Examination of the above cited pages of transcript reveals that cross examination ascertained that Cosmopolitan's expert witness, Paul G. Godley, Jr., testified that the proof of performance would be 10% *below* Cosmopolitan's MEOV. This point clearly was made on page 56 of the transcript:

Q. Mr. Godley, what values would you intend to file in your proof with the Commission?

A. This is a question that might better be asked after I have done it or after I have worked on the facility.

Q. Mr. Godley, would it possibly be lower than your calculated value?

A. No, it would probably be 10 percent below MEOV.

Q. Possibly 10 percent below the MEOV, did you say?

A. That is correct.

The MEOV discussed and as to which Huntley did have notice and an opportunity to be heard were those stated in Cosmopolitan's application, not

those evolved by the Review Board a year or more after the record was closed.

In view of this testimony, it reasonably cannot be argued, as the Commission does, that Huntley had the responsibility further to cross examine Mr. Godley on this issue. This was done in a clear and competent manner so that there was no need for Huntley to duplicate this questioning. It also should be noted that this testimony substantially was repeated during redirect examination by Cosmopolitan's counsel.

Based upon this testimony and an awareness of existing Commission policy, it was reasonable for Huntley to rely on the representation that Cosmopolitan's proof of performance would not exceed its MEOV. In *South Central Broadcasting Corp.*, 16 FCC 561, 566 (1952) the Commission stated:

"When an applicant specifies a directional antenna pattern and parameters which will produce that pattern, it is expected that the array will be adjusted to obtain as closely as possible the proposed theoretical pattern. Any proposal otherwise to adjust the array, constitutes an amendment . . ."

The Commission is arguing that departure from this rule, cited *supra*, is proper and that Huntley should have anticipated their unique and unprecedented assertion. It must in all fairness be added that Mr. Huntley could not have cross-examined on MEOV which Cosmopolitan had not put in evidence, and which the Review Board did not create until after the record was closed.

Analysis of Cosmopolitan's Brief reveals that it characterizes Huntley's argument, that he was denied a fair hearing, as "argumentative afterthought." (CB. p. 5) This contention lacks merit because it is not relevant to the issue at hand and is unsupported by record read as a whole.

Cosmopolitan vainly seeks to find support for its assertion that Huntley in Oral Argument acknowledged that the interference and not the antenna maintenance and adjustment issue was the controlling issue. (CB. p. 6) This baseless conclusion finds no support in the record when read in context. A clear reading of the transcript of the Oral Argument before the Review

Board reveals that the maintenance and adjustment issue was considered as being separate from the interference question. This is shown from the Board's questioning of Mr. Tacy of the Broadcast Bureau of the Federal Communications Commission (Tr. pp. 552-553):

MR. PINCOCK: I have one question. Maybe it will be a little easier for you.

MR. TACY: I hope so, sir.

MR. PINCOCK: If we were in fact to find adversely under Issue 2 with respect to the applicant would we by virtue of this finding be precluded from ultimately concluding that the application might be granted?

In other words, Issue 2 only goes to the adjustment and maintenance of the proposal as proposed. If we were to conclude that one or the other of the applicants, particularly Cosmopolitan, . . . did not or could not . . . construct and operate as proposed, would we then be precluded from ultimately finding that they were nevertheless qualified if on the next issue we found that they were not likely to cause interference to KWKH?

MR. TACY: Yes, sir. I think you could make that finding. I assume this is the ultimate issue here, to prevent the possibility of interference to the other station, *but you would be exceeding the Commission's policy in allowing the MEOV to be violated.* (Emphasis added)

The record on this point conclusively reveals that it is Cosmopolitan's and the Commission's contention, that the maintenance and adjustment issue is fused with the interference issue, which properly may be classified as "argumentative afterthought."

II. THE DETERMINATION OF THE REVIEW BOARD IN ASSIGNING DECISIONAL SIGNIFICANCE TO EDNA CONTRAVENES THE OBJECTIVES OF SECTION 307(b) OF THE ACT

The Commission's contention that the award of a preference under Section 307(b) to Cosmopolitan was proper contravenes the established policy of

the Federal Communications Commission. As Huntley has shown previously, the basic test of relative need of communities for a transmission service is their population and the number of standard broadcast facilities in each of the communities. *Kent-Ravenna Broadcasting Co.*, 22 Pike & Fischer RR 611 (1962). On the basis of this standard, the Review Board was required to find that Yoakum with the greater population has the greater need for the broadcast service. It was an abuse of discretion for the Board to look beyond the communities involved in assessing the need for a transmission source. The Board also acted erroneously when it assigned primary decisional significance to Edna's status as county seat because it failed to demonstrate any direct relationship between that status and the need of Edna for a first local transmission service.

Cosmopolitan's argument that ". . . an expert agency such as the Commission enjoys broad discretion in construing and applying its statutory mandate" (CB. p. 7) avoids the question raised by Huntley. It is Huntley's contention that the Review Board in awarding a 307(b) preference to Cosmopolitan contravened the established policy of the Commission and as such exceeded its authority which is limited to routine review functions and not the making of new policy for the Commission. It, of course, cannot be argued that the Commission's failure to review constituted adoption of the Review Board's new policy. If the Commission were to sanction the Board's act it would do so in a clear manner in order to assure certainty and predictability for future applicants.

CONCLUSION

It has been shown that the issue before the Court remains one to determine whether the Commission abused its discretion when it found Cosmopolitan qualified to be a licensee. Huntley contends that he was denied due process by this finding. The briefs of Cosmopolitan and the Commission attempt to veil this issue from the Court's scrutiny by focusing on the question

of interference. It is Huntley's contention that it was improper for the Review Board to consider interference and to award a preference under Section 307(b) to Cosmopolitan since positive findings under these issues cannot explain away the bedrock issue that Cosmopolitan is unqualified to be a licensee. For these reasons, this Court, pursuant to Section 402(b) of the Act, 47 U.S.C. §402(b), 66 Stat. 718, must remand this case to the Commission with an order that the Review Board's decision be set aside and that an order be entered granting Mr. Huntley's application and denying that of Cosmopolitan Enterprises, Inc.

Respectfully submitted,

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February 13, 1970

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APPENDIX

IN THE

United States Court of Appeals

FOR THE DISTRICT OF COLUMBIA CIRCUIT United States Court of Appeals
for the District of Columbia Circuit

No. 23,421

FILED FEB 13 1970

H. H. HUNTLEY,

Nathan J. Paulson
CLERK

Appellant,

v.

FEDERAL COMMUNICATIONS COMMISSION,

COSMOPOLITAN ENTERPRISES, INC.,

Appellee,

Intervenor.

On Appeal from an Order of the
Federal Communications Commission

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(a)

CONVERSION TABLE

This table presents the appropriate pages of the Appendix which correspond to the materials in the Record cited in Appellant's Brief.

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(The documents referred to were marked for identification as Cosmopolitan Enterprise Inc., Exhibit Nos. E and E-1.)

BY MR. BOROS =

6 Q Do you have any corrections or additions, deletions
7 or changes to make to any of the material encompassed in No. 1
8 -- I mean No. E and E-1 of Cosmopolitan?

9 A For Exhibit E-1 I have revised Page 3 which you
10 distributed this morning.

11 Q And that is in place of the original Page 3 which was
12 included at the time this material was exchanged in the mail.
13 is that correct?

26 Yes, Sir.

15 MR. BOROS: Every party this morning, and your Honor,
16 received a copy of this revised page and copies of both exhibits
17 including the revised page have been supplied to the reporter.
18 The revised page will be inserted in the copies given to the
19 reporter and the original material offered through the mail
20 will be deleted and not offered into the record.

21 PRESIDING EXAMINER: This is Page 3 for Exhibit E-1.

22 MR. BOROS: That is right. Otherwise known as supplementary
23 exhibit of Cosmopolitan Inc.

34 BY MR. BOBOS:

25 Q. Do you have any other changes Mr. Godley?

1 A No.

2 Q Then the material you have before you is true and
3 correct?

4 A Yes, sir.

5 MR. BOROS: I offer into evidence Exhibit No. E and Exhibit
6 No. E-1.

7 PRESIDING EXAMINER: Are there any qualifying questions?

8 MR. POTTS: I have none, Mr. Examiner.

9 PRESIDING EXAMINER: Are there any objections?

10 MR. TACY: Just a minute, Mr. Examiner. Objection, Mr.
11 Examiner, I refer you to Page 4 of Exhibit E, specifically Lines
12 9 and 10 and move that they be stricken from the record. I
13 think they are conclusionary, self serving and certainly it
14 may be established by the evidence, but they are conclusionary
15 as of now, and I move they go out.

16 PRESIDING EXAMINER: I think what you say is correct,
17 but normally an expert witness is allowed to express an opinion
18 based on calculations he has made. Obviously, the statement
19 which is self serving does not in and of itself prove the
20 issue.

21 MR. OCKERSHAUSEN: As long as we understand that is his
22 opinion.

23 PRESIDING EXAMINER: That is certainly the way I accept
24 it.

25 MR. OCKERSHAUSEN: I withdraw the objection. I have no

more qualifying questions or objections.

PRESIDING EXAMINER: Do you have any, Mr. Tacy?

MR. TACY: I have a couple of qualifying questions, not as to the witness' qualifications but as to the exhibit's qualifications.

PRESIDING EXAMINER: Let me ask this before we proceed. I have assumed that everyone has conceded Mr. Godley's qualifications to appear and to testify.

MR. COKERSEN/USEN: International does.

MR. TACY: The Broadcast Bureau does.

The first question I have concerns the exhibits and it is this.

XXX 13 CROSS-EXAMINATION

14 BY MR. TACY:

15 Q Do you have with you, sir, the patterns for the
16 stations listed on Page 5 of the supplementary exhibit, E-1?

17 A Yes, sir, I have a single copy. I would be glad
18 to let you see it. I can leave it with you.

19 Q Now, referring again to the exhibits, when the stub
20 radials were measured on station KWKH were any of the previously
21 measured points verified by you?

22 A No, they were not. You are referring to the 1941
23 measurements?

24 Q Yes, sir.

25 A No, we did not recheck any 1941 measurements.

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MR. TACY: We have no further qualifying questions, Mr. Examiner.

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PRESIDING EXAMINER: Then I will ask if there are any objections to Exhibits E and E-1?

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MR. POTTS: I have no objections, sir.

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MR. COCKERSON USEN: No objections, sir.

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PRESIDING EXAMINER: Mr. Tacy, do you have any objections?

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MR. TACY: Mr. Examiner, in view of the witness' answer to the last question concerning previous measurements and in connection with the stub radials appearing in Exhibit E on Page 26, Figure 7 -- it is not only Figure 7 but similarly on Figure 8 -- in the absence of verification on previously measured points, it is the position of the Broadcast Bureau that the stub radials which appear on those two pages of the exhibits are objectionable inasmuch as they are completely unsupported by any main radial and standing alone the Broadcast Bureau does not feel this is evidence that may properly be in the proceeding.

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PRESIDING EXAMINER: I want to be clear as to what these represent. Was there a main radial run and were these stub radials taken to corroborate the main radial?

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THE WITNESS: The stub radials were taken to corroborate measurements made by KWKH. We refer to five KWKH radials. The stub radials are situated midway between three of the KWKH measured radials.

1jb-6 1 PRESIDING EXAMINER: Where do these measured radials
2 appear in the exhibit?

3 THE WITNESS: On Figure 3 they are shown geographically.
4 It is a map showing the location of the KWKH radials and the
5 stub radials.

6 PRESIDING EXAMINER: How can I tell which one is the stub
7 radial?

8 THE WITNESS: They are labeled going clockwise, from the
9 southwesterly direction, there is a measured radial and this
10 means it is a 1941 measurement. The second one is also
11 measured by KWKH. The third radial is a stub radial measured
12 by me. The fourth radial is measured by KWKH. The fifth
13 radial is measured by me and the sixth and seventh radials are
14 measured by KWKH.

15 PRESIDING EXAMINER: In other words, where the date 1941
16 appears, I could conclude this was measured by you and gives
17 the stub radials?

18 THE WITNESS: Yes, sir.

19 PRESIDING EXAMINER: And the others were all made in 1941
20 by KWKH, is that right?

21 THE WITNESS: That is right.

22 PRESIDING EXAMINER: Is it your contention, Mr. Tacy, these
23 stub radials do not have any main radial?

24 MR. TACY: Yes, sir, by reason of the fact the witness
25 testified none of the 1941 measurements were verified by him at

2-7 1 any point, and they were not, of course, taken by him.

2 PRESIDING EXAMINER: This presents a somewhat unique
3 question. There is a case which I think is labeled Old Belt
4 Broadcasting Company in which measurements were taken on stub
5 radials for a station on the south side of Virginia. I
6 remember it quite clearly because I was the Examiner and I
7 was sustained by the Commission, the holding being stub radials
8 can be made to corroborate data on main radials, but that all
9 of the radials be measured by the same party, and I have not
10 encountered this problem of two different parties, in effect,
11 making the measurements.

12 MR. TRACY: I don't know if we can say here the stub
13 radials were made for that specific purpose, of
14 corroborating what this witness has already done. And I
15 believe that our position is just that, that in the absence
16 of any verification the witness may have, that actually these
17 1941 measurements are just not admissible here.

18 You would have to rely -- I mean the '66 measurements are
19 not admissible -- and perhaps we have to rely on M-3.

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1 MR. BOROS: I don't understand the purport or the substance.
2 If there is any substance to the Broadcast Bureau's objection,
3 it seems to lie in the fact that antiquity diminishes the
4 value of measurements. There has been no attack on the license
5 of KWKK. There has been no attack made on the qualifications
6 of whoever took the first measurements. These are not
7 inconsistent with the first measurements. There is not doctrine
8 saying if one person proves he is right by confirming his
9 previous action, that stands at a higher level than if two
10 people independently reach the same conclusion.

11 Therefore, I am bemused by what the Broadcast Bureau
12 says. Perhaps they have a point which they have not articulated.
13 There are measurements made 25 years ago, but the law presumes
14 continuity. These stub measurements corroborate, dovetail,
15 verify, affirm without any question, the initial measurements
16 and certainly they are at a higher level than M-3 which,
17 sacrosanct as the Commission's staff may regard it, still only
18 is based on measurements, some taken over 25 years ago.

19 PRESIDING EXAMINER: I am not sure the law presumed what you
20 said it does because what I have understood from engineers is
21 that conductivities have been known to change.

22 However, I do not want to get into that. That is a technical
23 question.

24 MR. OCKERSHAUSEN: There are two things, one, I believe
25 Mr. Boros' comment about antiquity does not necessarily apply

1 with respect to measurements. I think one of the strongest
2 arguments made against old measurements is that the conductivity
3 does change over the years, the contours.

4 The showing that is proposed to be made here is that there
5 is a difference and the conductivity is lower than what is
6 shown by KWKK's measurement.

7 The third thing Mr. Examiner, is this. I did not raise the
8 objection at this point because I held it back for cross-
9 examination, but I would like to ask the witness did he take
10 any close-in measurements as provided by the rules as a part
11 of these stub measures.

12 THE WITNESS: These stub measurements were intended
13 completely to corroborate KWKK measurements and definition by
14 definition, stub measurements are usually made in the area of
15 concern rather than in other areas.

16 MR. OCKENSHAUSEN: What is your answer? Did you make
17 close-in measurements or not?

18 THE WITNESS: NO.

19 MR. OCKENSHAUSEN: There is another reason I would offer
20 that these measurements are not admissible. The rules, Rule
21 63186 and 152 provide that close-in measurements will be made up
22 until about 20 miles -- to 20 miles before making the stub
23 measurements. In absence of compliance with the rules I move
24 there is another ground for not admitting these measurements,
25 quite apart from what the Broadcast Bureau mentioned.

1 MR. TACY: One further fact, Mr. Examiner, I do not believe
2 that there is any way of checking the power that the 1941 and
3 1966 ---

4 MR. POTTS: Mr. Examiner, may I speak to this too? We
5 have not objected to these stub measurements because we
6 believe they were attempting to confirm the radials run in
7 1941, but I think as a matter of logic, if the 1941 measurements
8 being 25 years old, are now no longer reliable because of the
9 possible changes in conductivity and therefore, these stub
10 radials do not have the necessary foundation and cannot be admitted,
11 then I would suggest that we do what Mr. Tacy suggested
12 the possibility of and go right back to M-3 because either
13 1941 measurements are valid in terms of the stub radials or
14 they are not useful for any purpose, in which case we have
15 no measurements before us which are available and reliable.

16 Therefore, we should use M-3.

17 MR. BOROS: I would like to take the witness and
18 perhaps clarify this on the record. I am sorry I interrupted
19 but I presume he is not qualified to testify as to whether
20 conductivity changes.

21 In know nothing in the training of lawyers which
22 qualifies us to testify to that.

23 PRESIDING EXAMINER: I expressed myself on that just
24 a few minutes ago. I wish you would develop the background
25 of these stub radials more fully.

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REDIRECT EXAMINATION

BY MR. BOROS:

Q Mr. Godley, how did you go about taking these stub radials? Would you state the steps you took and the reasons why you took these steps?

A On receipt of the measurements made by WKHK, detailed analysis has shown that at the one-tenth milivolt contour, which is of concern here, there was some 125 to 150 miles between existing measurements, and in view of the fact this was a considerable distance it was felt completely desirable here to make measurements to locate contours somewhere midway of this 120, 150-mile gap.

Q Who felt this?

A I felt this. And not only that, but the Commission's map of conductivities shows a very large area of very low conductivity inbetween two of the WKHK radials.

Q Could you identify those two radials?

A Yes, if you look at Figure 3 ---

PRESIDING EXAMINER: Would you identify them by the bearing?

THE WITNESS: It is inbetween the 205 and 250 degree radials, at the stub radial degrees of 225 degrees if I read that correctly. In the stub radial, direction of 225 degrees.

You will note that the stub radial runs through a considerable section of four conductivities, while the t05 WKHK radial traverses only a very small portion of the four conductivities,

1 and the 250 degree KWKK radial traverse's almost none of that
2 conductivity of four in that area.

3 So these stub radial measurements did confirm that there
4 is an area of low conductivity there as shown on the Commission's
5 map.

6 BY MR. BOROS:

7 Q What do the radials show and what do the maps show
8 in terms of conductivity?

9 A The radial is intended primarily to locate the points
10 on the one contour and not to determine conductivities. The
11 analysis does show that the conductivity is considerably poor
12 in that direction and in directions on either side of the stub
13 radial.

14 PRESIDING EXAMINER: Did you say that the purpose of running
15 the stub radials was to locate the 0.1 contour?

16 THE WITNESS: That is correct.

17 PRESIDING EXAMINER: It was not to determine conductivity?

18 THE WITNESS: No, we are measuring the KWKK signal
19 directionally. We are concerned with your .1 milivolt contour
20 and we have blanketed that by 50 miles on each side.

21 PRESIDING EXAMINER: Are you familiar with the Jefferson-
22 ville case, Mr. Boros? It is about 8 years old now.

23 MR. BOROS: I would say not.

24 PRESIDING EXAMINER: I think what I will do is to reserve
25 ruling on this because there are several legal problems

1 involved here. I do not have the citation of the case right
2 now, but I can supply it to any party that wants it. The
3 substance of that holding by the Commission was that you could
4 not use a stub radial for determining the location of a
5 contour and they said it very emphatically.

6 Now, the Old Belt case that I referred to earlier says
7 you can run stub radials adjacent to a main radial and if I am
8 not mistaken, the distance of the stubs in that case in terms of
9 degrees, was about 5 degrees or something like that.

10 I would have to check the case to find out. But I am going
11 to reserve ruling on the objections that have been noted, and
12 I may possibly, before the case is over, ask for briefs on
13 this point.

14 With that observation, however, I will receive Exhibits E and
15 E-1

16 XXX 16 (The documents heretofore marked
17 17 for identification as Exhibit E
18 18 and E-1 were received in evidence.)

19 MR. BOROS: We have no further questions of Mr. Godley.

20 PRESIDING EXAMINER: Do you wish to commence cross now
21 or would you prefer a short recess?

22 MR. POTTS: I believe a short recess.

23 PRESIDING EXAMINER: I think sometimes that tends to cut
24 down the length of cross-examination.

25 We will take a short recess.

(Whereupon, at 11:00 a.m. a recess was taken until

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PRESIDING EXAMINER: Any cross-examination?

MR. POWERS: I have no cross-examination.

PRESIDING EXAMINER: Mr. Ockerhausen?

MR. OCKERHAUSEN: I have just a few questions.

EX
5
CROSS-EXAMINATION

6 BY MR. OCKERHAUSEN:

7 Q Mr. Godley, let me direct your attention to Page 6
8 of your Exhibit N. I wonder if you could clarify for us the
9 importance of the sentence which begins on Line 8 and goes
10 through Line 10 and particularly what you mean by "smaller than
11 average mutual couplings?"

12 A Well, the most common directional antennas have
13 spacings on the order of 80 degrees, one-quarter wave length.
14 And here we are talking about spacing of 150 degrees which is
15 closer to one-half a wave length, considerably greater than
16 average, and the mutual couplings therefore decreases in the same
17 degree.

18 Q So that is what you mean by "smaller than average?"

19 A Yes, sir.

20 Q On the same page, I would like to direct your atten-
21 tion to the sentence, Line 30, which reads, "rigorous mathematical
22 analysis indicates good systems stability." Do you have any
23 of these mathematical analysis with you? Can you tell me what
24 you mean by that?

25 A The mathematical analysis are illustrated in Exhibit E-2

1 Page 3. The illustration starts at the bottom of Page 2.

2 Q Does that demonstrate stability? Is that what you
3 are saying?

4 A That is correct.

5 Q Is that the context of Page 2 and 3?

6 A This is one demonstration, yes, sir, a theoretical
7 demonstration.

8 Q Is it your testimony that the material beginning at
9 the bottom of Page 2 and going over to Page 3 relates to
10 stability?

11 A That is a theoretical measure of stability, yes.

12 Q Now, would you please turn to Page 10 of the same
13 exhibit?

14 PRESIDING EXAMINER: This is Page 10 of Exhibit E?

15 MR. OCKERSHAUSEN: Yes, sir.

16 BY MR. OCKERSHAUSEN:

17 Q The sentence beginning at Line 6 with the word "some"
18 and running through Line 8, the word "result". I am particularly
19 interested in your meaning of the word "will", which is just
20 before "result" -- "will result" -- are you postulating that
21 is the factor? Isn't there any room for any doubt about it?

22 A Very little room for doubt.

23 MR. OCKERSHAUSEN: I would like to call your attention to
24 that statement, Mr. Examiner, and suggest again, as long as we
25 understand this is the witness' opinion, we have no objection

1 to the use of the word "will".

2 MR. BOROS: You have already waived any chance to object,
3 so I respectfully submit this is gratuitous and an unnecessary
4 statement, Mr. Cokershausen.

5 PRESIDING EXAMINER: Apart from the technicalities, I
6 think I have already made it clear that all of this is opinion
7 evidence. Of course, in the last analysis, the Commission
8 itself will draw its own conclusion.

9 BY MR. COKERSHAUSEN:

10 Q I next direct your attention, on the same page, to
11 the sentence beginning on Line 11 with respect to the "Vitro
12 Type 112 meter. Are you familiar with that meter?

13 A I am familiar with the specifications.

14 Q Have you ever used one?

15 A No, I have not.

16 Q Are you aware that that is the combination phase and
17 current monitor?

18 A Yes, sir, I am.

19 Q Are you aware also that currents are affected by
20 modulation on that monitor?

21 A Yes, sir.

22 Q So that your statement here that it is not affected
23 by modulation should be qualified to indicate that the currents
24 may vary with modulation?

25 A That is correct.

1 Q Are you going to be employed as the engineer who
2 constructs and proves in this antenna?

3 A So far as I know, yes.

4 Q Let me ask you, Mr. Godley, again with respect to
5 the statement at the bottom of Page 10, commencing at Line 25
6 and reading to the end of that paragraph. Could you tell us
7 what procedures you would use if the readings did vary?

8 A There are several procedures that can be used. One
9 is to make measurements closer in, measurements at other
10 locations. The second is to check back during a test period
11 to non-directional measurements.

12 Q Do you mean that you propose to operate non-directional
13 to make this check that you just referred to?

14 A No, I do not. I said that during the test period, if
15 we get variations that are believed to be caused by conductivity
16 changes, it is always possible to refer back to non-directional
17 checks, to provide some information on whether the changes are
18 caused by conductivity variations or by the directional pattern
19 of variation. This is what I am referring to here.

20 Q Would you please turn to Page 11 and I direct your
21 attention to the sentence which begins at Line 21, Page 11 of
22 Exhibit E.

23 MR. BOROS: Line 21?

24 MR. OCKERSEAUSEN: It begins "Assuming center tower
25 variations," et cetera.

1 BY MR. OCKERSHAUSEN:

2 Q Is this what you mean when you say in Line 22 "plus
3 or minus one degree in phase or plus or minus one percent in
4 current" don't you mean "and"?

5 A No, I mean "or".

6 PRESIDING EXAMINER: May I ask this question, Mr. Godley?

7 If the word "and" were substituted for "or", would that
8 change your statement as to the maximum radiated field excursion?

9 THE WITNESS: Yes, it would. The information shown on
10 the Table 6 which is referred to here shows only the maximum
11 for the either or.

12 BY MR. OCKERSHAUSEN:

13 Q I want to make one observation. Your heading of that
14 particular exhibit, Page 19 that you referred us to says "based
15 on one percent and one degree."

16 A You will note in the column entitled "Maximum
17 Variation" that there is a reference to a note which I believe
18 explains a little more in detail on this.

19 Q Thank you. I see it now.

20 Mr. Godley, would you please refer next to Page 19
21 of Exhibit E and consider with it the information on Figure 2,
22 and I wonder if you can give us at this spot on Page 19, the
23 mso's for your azimuths beginning at Numbers 3 and going
24 through Number 11.

25 (No response.)

1 Q Do you understand what I mean?

2 A I understand what you mean, yes.

3 For Line 3, 346 degrees azimuth. The meov is 17 millivolts.

4 For Line 4, 11.9; for Line 5, 12.2; for Line 6, 11.4;

5 for Line 7, 9.5; for Line 8, 10.7; for Line 9, 13.5; for Line

6 10, 17; for Line 11, 26. I am sorry, 26 degrees azimuth. The

7 meov for Line 11 is 20 millivolts.

8 PRESIDING EXAMINER: Would you mind repeating the meov
9 for Line 3?

10 THE WITNESS: For Line 3 the meov is 17 millivolts.

11 MR. OCKERSHAUSEN: Thank you very much.

12 MR. BOROS: What is 11? Did you give 11?

13 PRESIDING EXAMINER: 11 was 20.0.

14 BY MR. OCKERSHAUSEN:

15 Q I would like to refer you to Cosmopolitan Exhibit
16 E-1, specifically to Page 4, and your statement in the first
17 sentence, Line No. 1 on that page. It indicates that you
18 "intend to hold the relative parameter variation ---" and so
19 forth.

20 In that context, what will be your initial adjustment for
21 this array?

22 A What clarification would help you? I am not quite
23 sure what you want.

24 Q I think we can clarify it by referring you back to
25 Figure 2. Isn't it a fact that the solid line shown on there

1 is your computed pattern?

2 A That is correct.

3 Q And the dotted line is your meov?

4 A Yes.

5 Q When you adjust this array are you going to adjust
6 it to the computed pattern or to the meov?

7 A I am going to adjust it to a little better than the
8 computed pattern.

9 Q Would you explain that?

10 A Yes, sir.

11 Analyzing this theoretical pattern I have found ---

12 PRESIDING EXAMINER: Let the witness finish his answer.

13 MR. OCKERSHAUSEN: Go ahead.

14 THE WITNESS: Analyzing the theoretical pattern I have
15 found that from the adjustment in the field process, it would be
16 desirable to pull the calculated field shown here to lower
17 values in order to leave some additional tolerance for little
18 variations that might occur.

19 Q Can you give us some specific values in that
20 connection?

21 A Yes, sir, I think I can. Do you want the field I am
22 going to adjust to?

23 Q The azimuth and field.

24 A Azimuth and field. Talking about in the null zone,
25 it might save a little time --- I will start and give azimuth.

1 Theoretically we go through the numbers twice but I will give
2 it to you on the basis of azimuth. 341 degrees, the adjustment
3 field would be 39.7 millivolts. At 346 degrees, 12.7; at 351,
4 2.4.

5 Q Could you give degrees and azimuth each time so it
6 will read clearer in the record?

7 A At 351 degrees azimuth, 2.4 millivolts. At 356
8 degrees azimuth, 3.1 millivolts. At 1 degree azimuth, 7.3
9 millivolts. At 6 degrees azimuth, 2.7 millivolts. At 11 degrees
10 azimuth, 3.6 millivolts. At 16 degrees azimuth, 9.4 millivolts.
11 At 21 degrees azimuth, 13.5 millivolts.

12 At 31 degrees azimuth, 13.5 millivolts. At 36 degrees
13 azimuth, 9.4 millivolts. At 41 degrees azimuth, 3.6 millivolts.
14 At 46 degrees azimuth, 2.7 millivolts. At 51 degrees azimuth,
15 7.3 millivolts. At 56 degrees azimuth, 3.1 millivolts. At
16 61 degrees azimuth, 2.4 millivolts. At 66 degrees azimuth,
17 12.7 millivolts. And at 71 degrees azimuth, 39.7 millivolts.

18 Q Mr. Godley, I believe you overlooked azimuth 26.

19 A Azimuth 26 degrees, 15 millivolts.

20 MR. TACY: 71 degrees azimuth?

21 THE WITNESS: 38.7.

22 MR. TACY: May I have the bearing before the last?

23 THE WITNESS: 66 degrees azimuth, 12.7 millivolts.

24 BY MR. COKERSEAUSEN:

25 Q Mr. Godley, let me direct your attention to the

4-9 8 readings you just gave for azimuth, the bearing 351 degrees
2 which is 2.4 and 61 which is 2.4 and ask you, does that not
3 indicate to you that you will have obtained perfect symmetry
4 on this pattern?

5 A Yes, sir, this is the aim we are shooting for in
3 our adjustment process.

7 Q Have you, in your experience, ever been able to
3 accomplish perfect symmetry in deep nulls of this sort?

8 A With careful attention to that, yes, it can be done.

10 Q Your answer is yes, within your experience?

11 A Yes, I have done it.

12 Q Should you encounter any reradiation from external
13 objects around the site, isn't it a fact you would have a
14 difficult time trying to achieve that symmetry?

15 MR. BORGES: I object, that assumes something not in
16 evidence.

17 PRESIDING EXAMINER: I think it is a proper question.

18 THE WITNESS: That is true.

19 We have tolerance in our meov that is not symmetrical.
20 It is only pulled down on one side. So there is ample tolerance
21 there.

22 BY MR. OCKERSHAUSEN:

23 Q You are not expecting any reradiation, are you?

24 A No significant reradiation.

25 MR. OCKERSHAUSEN: That is all, Mr. Examiner.

10 PRESIDING EXAMINER: Mr. Tacy, do you have any cross?

1 MR. TACY: I have a few questions I should like to ask this
2 witness, but in view of the testimony he has just given, this
3 seems to be such a deviation from his application
4 and the calculations and figures submitted to the Broadcast
5 Bureau that I may ask for at least a recess to evaluate our
6 position here on cross-examination or what position we will now
7 take.

8 But I would ask Mr. Godley a few of these questions anyway.

9 BY MR. TACY:

10 Q In your experience, Mr. Godley, have you ever had
11 personal experience of adjusting an array of this sort to the
12 suppression you proposed and particularly the suppression now
13 proposed in the latter part of your testimony and with three
14 tolerances, and, of course, we are assuming that the power here
15 is 10 kilowatts?

16 PRESIDING EXAMINER: First of all, I think it just calls
17 for a yes or no answer and then you can explain it.

18 MR. TACY: Just in your personal experience.

19 THE WITNESS: In my personal experience, have I pulled
20 down to the depth shown in azimuth 351 and 61? Is that the
21 question?

22 MR. TACY: Yes, and assuming this power, 10 kilowatt power
23 and with a three tolerance array.

24 THE WITNESS: I believe I have, although not for proof

11 1 purposes, not for proof of performance purposes. I have
12 2 pulled down this low in many instances, primarily during the
13 3 initial adjustment processes.

14 4 BY MR. TRACY:

15 5 Q May I ask why it was not kept that low?

16 6 A Yes, I will be glad to explain. The situation in
17 7 the industry is such that if I came in with an array pulled
18 8 down that low and it was not necessary to hold it that low for
19 9 any purpose, the licensee would be modified to force the operation
20 10 to hold to a null considerably lower than necessary. So it
21 11 has been my practice through the years to adjust the arrays
22 12 and let them out so there is not too much tolerance between
23 13 the theoretical and the actual measured conditions.

14 14 Q And you are speaking now of a three tolerance array
15 15 and with 10 kw power?

16 16 A I am speaking of many different kinds of array.

17 17 Q I just wondered if your answer to this question was
18 18 based on your experience with this type of array that I think
19 19 we have described?

20 20 A Well, I have operated on three-element arrays, yes,
21 21 sir, the number of towers and whatnot. Really I do not have a
22 22 great deal to do with the department of the nulls, however.

23 23 Q Just in answer to this particular question, am I to
24 24 assume that you have never done this with respect to a three-
25 25 tolerance array even in the experience that you have recited?

1 A No, I don't believe you can assume that.

2 Q Then your answer is, yes?

3 A That is correct.

4 Q Where was this done?

5 A I did not come prepared to tell where. I would have
6 to go through my records.

7 Q But you could identify the situation and the station
8 so that the record would be clear?

9 A Yes.

10 Q Would you undertake to furnish that for the record,
11 please, sir?

12 A I can think of one looking at my notes here. On
13 Page 5 of Exhibit E-1 I believe, you will note KOMA, Oklahoma
14 City. It is a 50-kilowatt operation with three towers in a line
15 and there in 1947 I was able to pull the field down in the null
16 to the equivalent of 8.8 millivolts. And during the adjustment
17 process, there is every reason for me to believe I pulled it
18 down quite a bit further.

19 Q How many nulls, if you remember? How much further
20 in that respect?

21 A In this instance there was some nonsymmetry. One
22 null was pulled down to equivalent of 8.8 millivolts. The
23 other null was pulled down to the equivalent of 13.2 millivolts.

24 Q This present design calls for 2.4, does it not?

25 A This present design calls for an adjustment aim of

-13 9 2.4?

2 Q Yes.

3 A Yes. In the actual process I would let those and
4 fill those nulls in before I filed a proof of performance,
5 because if I filed a proof with nulls pulled into 2.4, the
6 usual broadcast or FCC process is to allow me 10 percent
7 variation over that, and there is no practical reason here to
8 limit the facility to that tight of a field.

9 Q Mr. Godley, what values would you intend to file
10 in your proof with the Commission?

11 A This is a question that might better be asked after
12 I have done it or after I have worked on the facility.

13 Q Mr. Godley, would it possibly be lower than your
14 calculated value?

15 A No, it would probably be 10 percent below meov.

16 Q Possibly 10 percent below the meov, did you say?

17 A That is correct.

18 Q Then getting back to your testimony a moment ago,
19 all of those adjusted values that have been read into the
20 record, these are not the values that you would intend to file.
21 Is that correct?

22 A That is correct. These are the values on which I
23 would do my initial adjustment, aimed at these values. Then
24 I would release the field to within approximately 10 percent
25 of meov, because if I did not, the license then would restrict

14 1 us unnecessarily.

2 PRESIDING EXAMINER: May I ask a question here for
3 clarification?

4 As I understand it, you are saying that you would make
5 an initial adjustment which would be to a relatively low value
6 and then you would release the field to a higher value which
7 would be approximately 10 percent of the meov?

8 THE WITNESS: That is correct. In the past when I have
9 adjusted to very low conditions, I find then that the license
10 requires those low conditions, and this is not a desirable
11 thing, when there is no need for that. It is not in the interest
12 of the client.

13 PRESIDING EXAMINER: In other words, your operating
14 adjustment is different from your initial adjustment?

15 THE WITNESS: That is right.

16 BY MR. TACY:

17 Q Would you turn to Page 3 of Exhibit E-1, please, Line
18 20 and also would you have available in Exhibit E the tabula-
19 tion or rather Table 6 found on Page 19?

20 Now, will you tell us, looking at Table 6 on Page 19 of
21 Exhibit E what the calculated value or the theoretical field,
22 millivolts per meter, is for azimuth 356?

23 A The theoretical field is 11.7 millivolts.

24 Q Now, in your proof, what value would you intend to
25 adjust to and file?

5-15 1 A 11 millivolts.

2 Q In that case then you would be filing below your
3 calculated value?

4 A For that particular azimuth, that is correct.

5 Q Now, if to that value you added the 12.3 millivolts
6 per meter, and I am referring you now to Page 3, Exhibit E-1,
7 and Line 20, adding that figure to the 11 millivolts would you
8 state whether you would then exceed the meov?

9 A The figure on Line 20, Page 3 is not one to be
10 added to another value.

11 Q Would you explain that, sir?

12 A The figure on Line 20 of Page 3 is one that was
13 developed based on assumed variations. In answer to a question
14 of the Broadcast Bureau, for variations from the theoretical
15 pattern it shows the total field, not the field to be added to.

16 Q Taking this then as a total field, in this particular
17 instance, would you state whether or not that does not exceed
18 the meov?

19 A The 12.3 millivolts is greater than the meov at that
20 point.

21 PRESIDING EXAMINER: Excuse me, does this relate to a
22 specific azimuth?

23 THE WITNESS: Yes, sir, this relates to the azimuth of 356.

24 BY MR. TACY:

25 Q I know you have made the statement that you would

-16 1 file a proof at 11. Why would you file at 11 rather than 11.7?

2 A 11.7 to the meov would leave a tolerance of about
3 three percent and this would be an unnecessary burden on the
4 licensee, to hold to tolerances that close.

5 Q Assuming that you file at 11 millivolts, as you
6 have stated here, wouldn't that give you a tolerance of 1.2
7 millivolts?

8 A That is correct, this is approximately 10 percent,
9 yes.

10 Q Based upon your last statement and such a filing,
11 how much could your parameters vary without exceeding the meov?

12 A Well, I do not have a theoretical pattern or computa-
13 tion based on this particular value.

14 Q Now, assuming that you adjusted to 11.7 and assuming
15 that you filed, that figure would in fact cause you to exceed
16 the meov, would it not?

17 A If we assume that I adjust to exactly the theoretical
18 conditions -- you are referring to Line 20, I presume again?

19 Q Yes, sir.

20 A Yes, this is correct.

21 Q It is not my intention, Mr. Godley, to ask you a
22 great many calculations here from the witness stand, but could
23 you give us any kind of an estimate of how much variation you
24 could have if you filed at 11.7 rather 11, as it is your
25 intention?

Jb-17

1 A I could give you tabulations, strictly theoretical,
2 that would show this type of information, yes.

3 Q Well, could you furnish that tabulation?

4 A I could.

5 Q For the record?

6 A Yes.

7 Q Thank you.

8 Now, again I refer you to Page 19 of Exhibit E, and
9 Table 6, in the tabulation of radiation. Will you state what
10 other bearings, other than 356, you would intend to file below
11 the calculated value? That is, file in your proof?

12 A This is a pretty broad question. Yes, I could
13 presumably give you the tabulation that showed adjustment aims
14 in all directions of the null zone.

15 Q Do I understand you would undertake to do that, Mr.
16 Godley?

17 A Yes.

18 Q Thank you.

19 Would it be possible for you to do it for us now, from
20 the witness stand?

21 PRESIDING EXAMINER: Let me ask a practical question here.
22 Since we are drawing fairly near the luncheon recess, is this
23 something that could easily be completed prior to two o'clock?

24 THE WITNESS: It is something I have an original copy of.

25 PRESIDING EXAMINER: You mean you have already done the

b-18 1 computation?

2 THE WITNESS: I have already done this.

3 MR. TACY: I wonder if it is satisfactory, if we could
4 just have that read into the record?

5 MR. BOROS: Why don't we reproduce some copies and distri-
6 bute them?

7 PRESIDING EXAMINER: That would be better. Could we call
8 this Exhibit E-2

9 MR. BOROS: Yes. Of course we are not the sponsor of the
10 exhibit.

11 PRESIDING EXAMINER: Why don't we do this. Why don't we
12 make copies of it, distribute it, and then you can make it the
13 Bureau's exhibit or your exhibit or a joint exhibit.

14 MR. BOROS: I think in two hours we can get copies repro-
15 duced and distribute them during lunch and save time on the
16 record.

17 PRESIDING EXAMINER: I think that is satisfactory.

18 BY MR. TACY:

19 Q Earlier you were testifying concerning certain
20 measurements made in 1941 on station KWKH. Are you aware,
21 Mr. Godley, of any measurements that were made on that station
22 in 1954?

23 A I am aware that there are some that do not go out to
24 the one-tenth millivolt contour.

25 Q And would this be the reason that you did not use

b-19 1 those measurements or submit them?

2 A To the best of my knowledge in 1954 -- the 1954
3 measurements do not traverse the area of importance here.

4 MR. TACY: Mr. Examiner, this morning I asked the witness
5 if he had certain patterns with him for the stations that he
6 had listed on Page 5 of his Supplementary Exhibit E-1. The
7 answer was in the affirmative. The Broadcast Bureau has not had
8 an opportunity to examine this information, and I am wondering,
9 in view of the hour, if it might not be practicable for us to
10 recess at the moment for lunch to give us an opportunity to
11 examine this material and to then proceed with what questions
12 we may have on the material after the lunch hour.

13 MR. BOROS: How much time do you want?

14 MR. TACY: This is difficult to say because we have not
15 seen the information.

16 MR. BOROS: That is why I raised it because I think you
17 are entitled to the time you need, and it would be productive
18 to the rest of us for you to have additional time, if you
19 needed additional time rather than to spend time with everyone
20 set, sitting in the hearing room. So perhaps we can work out
21 a system of notification so you can notify us when you want to
22 reconvene.

23 PRESIDING EXAMINER: Off the record.

24 (Discussion off the record.)

25 PRESIDING EXAMINER: On the record. The Broadcast Bureau

b-20 1 has indicated to me they would anticipate that a recess now
2 until 2 o'clock would give them sufficient time to examine
3 these patterns. It is understood, however, that if additional
4 time is going to be needed that they will notify the parties
5 so that we can meet at perhaps a later hour than that.

6 With that understanding, we will recess until 2 p.m.

7 (Whereupon, at 11:55 a.m., the hearing recessed, to recon-
8 vene at 2:00 p.m. the same day.)

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1 2:00 p.m.

2 PRESIDING EXAMINER: Are you ready to presume now,
3 gentlemen?

4 MR. TACY: Yes, sir.

5 MR. POTTS: Yes, sir.

6 Whereupon,

7 PAUL F. GODLEY, JR.

8 the witness on the stand at time of recess, resumed the
9 stand and testified further as follows:

10 CROSS-EXAMINATION (RESUMED)

11 BY MR. TACY: Mr. Godley, this morning during your
12 testimony you were asked a question which related to Table 60
13 on Page 19 of Exhibit c and specifically Azimuth 356 on that
14 table and at that time you will recall that you testified that
15 in the column under theoretical field, milivolt per meter, you
16 testified that in filing your proof you would reduce the figure
17 appearing now in that table, which is 11.7 to 11.

18 You were then asked the question as to whether or not you
19 could state any other changes or variations that might occur
20 in that same column.

21 Now, at this point do you have some statement to make
22 about that question?

23 A Yes. While Table 6 does not show me, my normal
24 practice is to adjust, taking into account possible variations,
25 to approve of performance value approximately 10 percent under

gr2 1 meov. And this would occur in any directions that might be
2 specified in the construction permit.

3 Q I now direct your attention to Cosmopolitan Exhibit
4 #-1 to the tabulation one, appearing on Page 5.

5 MR. TACY: At this time, Mr. Examiner, may the record show
6 that this applicant has furnished the Broadcast Bureau with
7 radiation patterns which relate to the information appearing on
8 Tabulation 1?

9 BY MR. TACY:

10 Q I will ask you first, Mr. Godley, to examine the
11 last column on the righthand side of the tabulation which is
12 entitled "Equivalent Null for RMS of 555 Millivolts Per Meter"
13 and I will ask you, are the figures appearing in that column
14 the result of measured patterns or are they calculated figures?

15 A These are determined on the basis of measured nulls
16 and they are shown to be the equivalent of what would occur
17 at Edna, Texas as should we get nulls of the equal depth.

18 Q And have you made that determination from the series
19 of radiation patterns that you have submitted to the Broadcast
20 Bureau for examination during the recess?

21 A Yes.

22 Q Now, with respect to tabulation number one, will you
23 examine that in connection with information you have furnished
24 the Broadcast Bureau and tell us in connection with that station,
25 the power involved, the number of towers, the number of nulls,

1 and the course as you have mentioned, the 10 KW equivalents
2 measured minimum that you found.

3 I asked you a series of questions which I would like to
4 have answered. I could take them one at a time if you like or
5 if you have them in mind you can answer them all.

6 A If you let me refer to that series of patterns ----

7 A I am sorry, I thought you had them.

8 (The document was given to the witness.)

9 PRESIDING EXRMINER: Let the record show that the witness
10 is being handed copies.

11 MR. BOROS: What is the relevance of the number of
12 towers, sir?

13 MR. TACY: Pardon me.

14 MR.BOROS: What is the relevance of the number of towers?
15 Do you think it has any relation to the depth of the null?

16 MR. TACY: The number of towers not only has that
17 relationship, it has all to do with the design of this
18 particular array, which is three towers in a line. And we
19 believe this is important for the evidentiary showing which
20 has been made here by the applicant in connection with this
21 exhibit, together with the other items that I have mentioned.

22 THE WITNESS: I will try to answer that for WHAL. It has
23 three towers. It has 50 kilowatts of power, four nulls. Does
24 that cover the question?

25 MR. TACY: May I interrupt for a moment to ask how you

1 ascertained that there were four nulls?

2 THE WITNESS: With three towers pulled in this tight,
3 even though they seem to be filled in here so they don't all
4 show distinctly, there has to be four nulls.

5 BY MR. TACY:

6 Q You are talking about the calculated pattern now?

7 A No, I am talking about the pattern that I have shown
8 here for you. While the nulls do not show distinctly, they
9 are there or the field would not be restricted as it is.

10 Q Do you know for a fact whether the calculated
11 pattern has four nulls or not, sir?

12 A I know for a fact if I calculated it I could show
13 four nulls and fill it in to be indistinct as it happens to
14 occur here in this measured pattern.

15 Q In other words, this occurs by the indistinction of
16 the particular pattern that we have before us for examination?

17 A Yes.

18 Q Now, what value did you use to convert the figure
19 in the last column to 8.35 milivolts per meter?

20 A I used the value of 1763 milivolts per meter (RMS).

21 Q What measured value did you use on WBAL's pattern?

22 A Could I ask you to elucidate a little bit on that?
23 What value in connection with what?

24 Q For example, what rating do you get at 225 degrees
25 on the pattern?

1 A I would call that 26.5 milivolts.

2 Q Now, would you proceed, if you would, sir, to give us
3 the same information concerning KSWS?

4 A KSWS has three towers, 10 kilowatt operation -- there
5 was one other question concerning that that I do not recall.

6 Q The number of nulls.

7 A This pattern again would have four nulls.

8 Q You are speaking theoretically now. It would have
9 four nulls, is that correct?

10 A Not only that, but actually, too. The fact that the
11 nulls are filled in to form a smooth curve does not mean the
12 nulls are not there.

13 Q Now, would you explain how you arrived at the figure
14 13.2 milivolts per meter in the last column?

15 A Shown here is a field of approximately 15 milivolts
16 and using this value and the RMS obtained with this array
17 and relating it to the same RMS that would be obtained in Edna,
18 Texas, we come up with a value of 13.2 milivolts.

19 Q Now if you will proceed, sir, to line number 6 and
20 describe that facility in the same manner.

21 A KING, Seattle, there is no indicated number of towers
22 on this pattern. It is a 50 kilowatt operation.

23 Q And you have the number of nulls there?

24 A I am going to assume by experience that this is also
25 a three element pattern. I may be in error there, but it looks

1 very much like a three, and if there is a three, there would
2 be four nulls.

3 Q Now, I wonder, Mr. Godley, instead of my asking you
4 about each and every one of these, would you proceed down the
5 list and just give us essentially the information you have gie
6 even on the others with exception that I will not ask you to
7 detail the methods by which you gave me your calculations in
8 the righthand column.

9 A Line 7 ----

10 MR. BOROS: May I suggest that you read the name of the
11 station rather than make reference to the line. I think it makes
12 for a clearer reference.

13 PRESIDING EXAMINER: I think that might be clearer.

14 THE WITNESS: WCBI, Columbus, Mississippi, has four towers,
15 operates with power of one kilowatt, and could have four nulls.

16 MR. TACY: At this point, Mr. Examiner, the Broadcast
17 Bureau would object to the exhibit inasmuch as there is
18 reliance put upon this four tower array.

19 We would have a similar objection to any of the others that
20 have four towers. I would state right now that two or three
21 towers in line, we believe, is analogous to what we may well
22 have here, but that when we are talking about suppressing a
23 one kilowatt operation with four towers, we are so far a field
24 from any relation to the design here that it is of no decisional
25 significance, of no evidentiary value.

1 MR.BOROS: May I be heard, Your Honor?

2 PRESIDING EXAMINER: Let me just comment on this. You may
3 very well be right, Mr. Tacy. Frankly, I don't know the
4 answer, but it does seem to me, looking at it from a legal point
5 of view, that your objection would run more to the weight
6 rather than the admissibility.

7 In other words, this is the kind of evidence which in the
8 Initial Decision or any point in the decision process might be
9 dropped out as immaterial. Frankly, I don't know the answer
10 right now, so I am at a loss to make a ruling and I would rather
11 you, if you feel this is of great importance, I would rather
12 you press it at a later date when we have all of the evidence
13 and the testimony before us.

14 MR. TACY: All right, sir. And I made my objection generally
15 in order to get a ruling, so we may now proceed with the
16 witness to give us the information concerning the rest of the
17 station.

18 PRESIDING EXAMINER: Suppose we let him testify as to each
19 station so there won't be any gaps in the record.

20 MR. TACY: Yes, that was my intention.

21 MR. BOROS: I think it may be appropriate for the Broad-
22 cast Bureau to clarify its position. The Broadcast Bureau has
23 made a statement about this matter and as you have pointed out,
24 this is by no means crystal clear. It strikes me if the Broad-
25 cast Bureau wants to adduce evidence on this it is free to do so.

1 and therefore the burden is on the Broadcast Bureau, not to
2 talk through counsel, but if there is a technical matter it
3 should take a position to introduce its own witness.

4 PRESIDING EXAMINER: This is why I want to wait until I
5 hear all the testimony. I have no idea what is coming in.
6 I would rather wait until the various experts have expressed
7 themselves.

8 MR. TACY: I understood the Examiner's ruling to be, for
9 the moment, as to its weight, it to be further argued in
10 proposed findings.

11 MR. BOROS: I want to state as I think there is something
12 undesirable in the Broadcast Bureau not making available to you,
13 so you can have a full record, its witnesses, and then lying in
14 wait and then arguing, when there is no opportunity to cross-
15 examine the Broadcast Bureau on the efficacy of its presentation.

16 MR. TACY: There is only an objection now as far as I
17 am concerned.

18 PRESIDING EXAMINER: Let us wait and cross that bridge
19 when we come to it.

20 MR. TACY: Proceed.

21 THE WITNESS: KOJM has two towers, power is 1,000 watts.
22 There are two nulls.

23 WGBS, Miami, has four towers, power is 10 kilowatts, and
24 there are eight nulls.

25 KCNC has five towers, power is 10 kilowatts, and it could
be ten nulls.

1 PRESIDING EXAMINER: You say there could be or there are?

2 THE WITNESS: The actual theoretical pattern shows eight
3 nulls.

4 In one instance there, one or more of the possible nulls
5 could have overlapped the other.

6 WINZ has six towers, has 10 kilowatts and has seven or more
7 nulls.

8 WIBG, Philadelphia has five towers, power is 10 kilowatts,
9 and there are eight nulls.

10 WLKW, Providence, Rhode Island, has six towers, power is
11 50 kilowatts, and there are eight nulls.

12 WDIA, the pattern does not show the number of towers, the
13 power is five kilowatts, and there are more than five nulls.

14 WTOP, Washington, has three towers, the power is 50 kilo-
15 watts, and there are four nulls.

16 WKBN, Buffalo, has three towers, the power is 50 kilo-
17 watts, and there are four nulls.

18 KOMA, Oklahoma City, has three towers, the power is 50
19 kilowatts, and there are four nulls.

20 There is another pattern here that is not listed on that
21 but it was furnished with this group of patterns.

22 Do you want me to comment on that?

23 PRESIDING EXAMINER: Which station is this?

24 THE WITNESS: This is a revised pattern on WGBS, Miami,
25 but it is not listed on Tabulation 1.

10

1 BY MR. TACY:

2 Q I believe, Mr. Codley, that while it is not listed it
3 is in the number of patterns. Is it your intention or was
4 it your intention in connection with Exhibit E to rely also
5 upon this pattern? If so I think you should comment on it in
6 the same manner.

7 A I might then add all of the details for Tabulation 1.
8 I will do that first and then comeback to these other points.

9 I would be Line 25, WGBS, Miami, Florida, frequency,
10 710KC; RMS, 1,393 milivolts; the null, 15 milivolts; the
11 equivalent null for RMS of 555 would be 5.95 milivolts. The
12 pattern also exhibits radiation restriction of below 20 mili-
13 volts per meter over an arc of 60 degrees and this would be
14 the equivalent of 7.95 milivolts per meter.

15 This pattern has six towers, the power is 50 kilowatts.
16 There are more than five nulls.

17 Q Mr. Godley, a general question about Column 5. Were
18 you able to read the minimum pattern from these sheets that were
19 produced here on the radiation pattern that we have, that is
20 that you gave to the Broadcast Bureau? Were those derived
21 from those particular sheets?

22 A All the figures in the column entitled "Null" and
23 then in brackets, "Milivolts Per Meter" are taken from these
24 proof of performance patterns.

25

1 BY MR. TACY:

2 Q Would you turn please to the radiation pattern for
3 WDIA, Memphis, Tennessee and explain to us how you secured this
4 information from that particular pattern?

5 (No response.)

6 Q I believe your figure is seven millivolts in the last
7 column.

8 A You are referring to the last column entitled
9 "Equivalent Null For RMS of 555?"

10 Q Yes.

11 A Yes, the RMS of the WDIA pattern is 395 millivolts.

12 If we are to equate this to a 10 kilowatt pattern proposed for
13 Edna, the null equivalent would increase to seven millivolts.

14 Q Perhaps we have a poor duplicate here, but could
15 you point out to us where you find your basic figure that you
16 mentioned, 395, or how you compute that?

17 A Yes, the pattern shown has a very deep null at approxi-
18 mately -- it would be in the upper righthand corner of the page
19 and the angle would be 227 degrees using these azimuths shown
20 on that page.

21 If we follow that down into the null zone, we find that
22 there is a dot on the innermost circle of ten circles, inside
23 of the 50, of the circle labeled 50 millivolts.

24 PRESIDING EXAMINER: Off the record.

25 (Discussion off the record.)

12 1 PRESIDING EXAMINER: On the record.

2 Let the record show that the witness is handing Mr. Tacy
3 the document that he was referring to, that is that the witness
4 was referring to.

5 May I ask, to make the record clear, Mr. Tacy, is this a
6 question of visual inspection of a document?

7 MR. TACY: No, sir, it is not, and I was about to ask the
8 witness the question again, as to where he esecured the 395
9 figure because we are not agreed. It is not visually apparent
10 from the material we have before us.

11 THE WITNESS: I might say that as part of these pattern
12 exhibits, the detail of a null area was copied and brought
13 along and that 395 was undoubtedly taken from the pattern that
14 showed a complete major null and this is just the second page
15 to it, to the license information.

16 BY MR. TACY:

17 Q In other words, in some instances all the way through
18 here you did use additional material?

19 A In this one instance at least, yes, sir.

20 PRESIDING EXAMINER: Is this material that is in the
21 Commission's records?

22 THE WITNESS: This is license information, all of it.

23 MR. TACY: I understand, Mr. Examiner, that it is subject
24 to check from the license file.

25 PRESIDING EXAMINER: I just want the record to be clear

1 where we got the figures.

2 BY MR. TACY:

3 Q Now, referring to the radiation patterns for WGBS,
4 two of them, I believe, Number 25 and Number 9, Miami, Florida.
5 Will you state if you know, where the WGBS site is located with
6 respect to the Everglades?

7 A Well, I might for clarification indicate here it is my
8 belief that the WGBS pattern listed for Line 9 is based on the
9 use of a different site than shown in the pattern for Line 25.

10 Q Now, let us take these one at a time. In Number 9,
11 that is the site, I believe, in 1948?

12 A Right.

13 Q Wasn't that site in the Everglades?

14 A That was on the Miami side of the Everglades, yes.
15 I don't know whether you could strictly say it was in the
16 Everglades per se.

17 Q Well, at that time in 1948, wasn't it flooded at that
18 time?

19 PRESIDING EXAMINER: Do you mean the site?

20 MR. TACY: Yes, sir, if you know.

21 THE WITNESS: Not that I recall, no.

22 BY MR. TACY:

23 Q Isn't that in effect swampland or wasn't it in 1948?

24 A It was flat land, yes, sir.

25 Q And swamp land so far as you know?

1 A No, I recall no difficulty, no catwalks getting out to
2 the towers and no problem like that that I recall. It was
3 perhaps a raised walkway created from shells.

4 Q Did you do the measurements there, sir?

5 A Yes, I did some of those.

6 Q Along the radials that you were measuring, what type
7 of terrain did you have there? Wasn't that swamp land?

8 A In some directions, yes, sir. In particular to the
9 west, but not too much in the direction of the major lobe.

10 Q Was that also obtaining in the null areas?

11 A The swampland, yes, to the west where the nulls are.

12 Q Now, I believe you said that Item Number 5, the present
13 site of the station, is somewhat different, that is geographically
14 Can you tell us whether or not that site also is located in a
15 similar area?

16 (No response.)

17 Q That is with reference to the flooding or swampland.

18 A I would say probably. I have not visited that
19 specific site. No, this present pattern was done by another
20 engineer. I am sorry to say.

21 PRESIDING EXAMINER: I am not entirely clear here, Mr.
22 Godley. In this list of stations on Page 5 of the supplementary
23 exhibit, did you have something to do with the tuning or with
24 the proof of all of these antennas?

25 THE WITNESS: No, I was responsible for three of them.

1 The question was, however -- the question I am answering here
2 was, what existing operation has nulls equivalent to that
3 proposed here. And this exhibit demonstrates conclusively that
4 the nulls, some of them 10 years or more, have been obtainable
5 to this degree of restriction.

6 BY MR. TACY:

7 Q Well now, in view of your last statement, Mr.
8 Godley, are there any of these cited that come to, as you
9 say, that decree of restriction or even close to it with
10 perhaps the exception of WGBS, Miami?

11 A Yes, sir, I believe so.

12 Q And what is the minimum proposed by Cosmopolitan in
13 this particular present design?

14 A Referring to meov field, I can say the minimum pro-
15 posed is 9.5 milivolts at one point.

16 Q And is it correct that you propose to adjust to 10
17 percent below that?

18 A If there is a required radial in that direction.

19 Q Is it true that according to the tabulation on Page 19,
20 Table 5 that your theoretical field is 5.6?

21 A That is the minimum theoretical field, yes.

22 Q And isn't it true that you have four nulls between
23 5.6 and 5.8 in the present design?

24 A On a theoretical basis, yes.

25 Q And in view of your statement -- returning now to

1 Tabulation 1 on Page 5 of Exhibit E-1 -- with the one exception
2 of the Miami station, do you find any similar or exact
3 situation with four nulls, with that minimum?

4 A I might say that here we are talking about measured
5 pattern as opposed to theoretical and if I had referred to
6 on Tabulation 1 to theoretical I might well have found many
7 more that were that deep or deeper.

8 Q Taking an analogy here from your testimony this
9 morning, Mr. Godley, let us turn again to Page 19 of Exhibit E
10 and Table 6 and take in Number 7, the 5.6 theoretical field.
11 Now, I believe this morning you testified that you were going
12 to take 90 percent of the maximum variation of the meov, which
13 is 12.5 there.

14 PRESIDING EXAMINER: Which is what?

15 MR. TACY: Excuse me, Mr. Examiner. I will have to
16 rephrase my question.

17 MR. BOROS: May I make this suggestion? Rather than
18 suggesting what the witness said this morning, I would respectfully
19 submit that it might be better if you asked him if he
20 said certain things and go on from there.

21 PRESIDING EXAMINER: Perhaps it would be fairer to the
22 witness.

23 MR. TACY: I agree.

24 BY MR. TACY:

25 Q This morning in your testimony, didn't you testify

1 that the meov would be 9.5 with respect to Number 7 on the
2 table, on Table Number 6?

3 Q Yes, that is correct, at an azimuth angle of 6 degrees

4 Q And in Number 8, did you testify this morning that
5 the meov would be 10.7 percent?

6 A For the azimuth of 11 degrees, I did.

7 Q Now, for azimuth 6 degrees, did you testify that you
8 would adjust it 90 percent, nine and one-half in the first
9 instance?

10 A If there is a specified radial in the construction
11 permit in that direction, yes, sir.

12 Q That would also be -- or I will ask you this -- did
13 you testify then that that would also be true with respect to
14 Azimuth 11, forming a meov of 10.07?

15 A That is also true for that.

16 Q So that based upon those calculations, then did you
17 not testify that with respect to Azimuth of 6 degrees, you
18 would in effect, take 90 percent of your 9.5 in the azimuth
19 six degrees.

20 And I will ask you if my arithmetic before me is correct to
21 say that would be 8.55?

22 A That is correct.

23 Q And with respect to Azimuth 11, where the meov is at
24 10.7, would it be correct to state that the figure 9.62 would
25 be a fair figure?

1 A Essentially correct, yes, sir.

2 Q Now, comparing these last two figures that we have
3 been talking about and what they represent, along with two
4 other nulls, do you now see a comparison or a similarity with
5 any of the figures in Column 5 on Exhibit Number E-1, Page 5?

6 A Yes, I can say that. I might add here that the
7 Line 22 facility at WKEW, Buffalo, has perhaps the directive
8 system most similar to that proposed by Edna and here the
9 null zone was pulled down to the equivalent of 7.4 milivolts
10 over an arc of 55 degrees and this is quite well under, the
11 values proposed for Edna..

12 Q Am I correct in reading -- again referring to Items
13 1 and 2 in Tabulation 1, Column 4 -- that the implication is less
14 than 25 over an arc of 55 degrees?

15 A That is correct.

16 MR. TACY: I think that is all.

17 Mr. Examiner, I have no further questions of this witness.
18 I wonder if counsel for the witness or anyone else would have
19 any objection to submitting these radiation patterns as an
20 Exhibit of Cosmopolitan?

21 The Broadcast Bureau would desire to have them in the
22 record and we could present them as our exhibits, I suppose.

23 MR. BOROS: If you want them I certainly won't object to
24 your submitting them.

25 MR. TACY: The applicant does not desire to submit these

19

1 exhibits?

2 PRESIDING EXAMINER: It seems somewhat immaterial to me
3 who sponsors the exhibits. I assume these are reliable and
4 accurate. That would be about the only question that could
5 arise.

6 MR. BOROS: I suppose so. Still I think in the interest
7 of procedure and regularity, if the Broadcast Bureau thinks
8 it desirable, I think it better for a clearer record, for them
9 to submit it.

10 PRESIDING EXAMINER: We are going to take a recess in a
11 few minutes so we will discuss that off the record.

12 I would like to ask a few questions myself now.

13 I have been looking over the little biographical statement
14 that appears on Page 2 of Cosmopolitan Exhibit E, Mr. Godley.
15 It is very succinct but I assume from it you have designed other
16 directional antennas.

17 THE WITNESS: Yes, I have.

18 PRESIDING EXAMINER: Have you in your own experience ever
19 designed a two-element array?

20 THE WITNESS: Yes, sir.

21 PRESIDING EXAMINER: And a three-element array?

22 THE WITNESS: Yes, sir.

23 PRESIDING EXAMINER: How about a 4 or 5 or 6?

24 THE WITNESS: I have gone up to seven.

25

1 PRESIDING EXAMINER: I assume also that in these different
2 antenna designs the arc of suppression is varied somewhat?

3 THE WITNESS: Yes, each directive antenna is a custom
4 design for a specific and individual situation.

5 PRESIDING EXAMINER: Now, in your Exhibit E-1, there occurs
6 this statement on Page 4, Line 5, "Contrary to some common
7 conceptions, deep nulls are not necessarily easier to obtain
8 than a greater number of towers."

9 First of all, whose common conceptions are these? Are
10 these among consulting engineers or among the layman?

11 THE WITNESS: I don't believe it would be true among the
12 consulting engineers, but among other people, this would be
13 true.

14 PRESIDING EXAMINER: Are they more difficult to obtain
15 with a great number of towers?

16 THE WITNESS: I might say that after initial set up on a
17 two-element system, a real deep null on the order we are
18 talking of could be obtained in the matter of a half hour.
19 And this time is increased with the additional elements to
20 control.

21 PRESIDING EXAMINER: Suppose we were talking about a six-
22 element?

23 THE WITNESS: Six-element would stretch into a matter
24 of days, months, probably, because there are so many more
25 combinations that you can throw.

1 PRESIDING EXAMINER: Would the obtaining of the nulls in
2 the three-element arrays fall somewhere in between these two,
3 in the terms of difficulty?

4 THE WITNESS: Yes, I would say very generally that a three-
5 element system might be twice as easily handled as a four-element
6 system.

7 PRESIDING EXAMINER: Now, would your answer depend in part
8 on the width of the arc of suppression?

9 THE WITNESS: Yes.

10 PRESIDING EXAMINER: Would it definitely depend on it?

11 THE WITNESS: It definitely does.

12 PRESIDING EXAMINER: Suppose the arc is relatively small,
13 what effect does this have?

14 THE WITNESS: Generally with a relatively small arc you
15 can get the suppression with two towers which would give one
16 null in any given area.

17 PRESIDING EXAMINER: You are saying it is easier to handle?

18 THE WITNESS: It is much easier.

19 PRESIDING EXAMINER: So if you have a wide arc of suppression
20 your problems increase?

21 THE WITNESS: Increase, that is correct.

22 PRESIDING EXAMINER: Then speaking generally, is there
23 a relationship between all of these factors that have been
24 enumerated; that is, the arc of suppression, the number of
25 towers, the power involved? Are these variables, in other words

1 which can affect the difficulty of adjusting the array?

2 THE WITNESS: Yes, sir.

3 PRESIDING EXAMINER: And could you tell me which ones
4 are most critical in your opinion, based on your experience in
5 obtaining the desired adjustment?

6 THE WITNESS: I would say a high degree of suppression
7 over a large arc is the most difficult to obtain.

8 PRESIDING EXAMINER: In that instance, would the power have
9 any effect upon it?

10 THE WITNESS: Yes, in my tabulation I have used stations
11 from one kilowatt to 50 ---

12 PRESIDING EXAMINER: Is it easier with a one kilowatt
13 than it is with 50?

14 THE WITNESS: If we are talking about absolutely field
15 values it is easier with a one kilowatt than a 50. But if we
16 are talking about relative suppression, there is no difference.

17 PRESIDING EXAMINER: I think that is all for right now.

18 Before we take a recess, I would like to observe that
19 since the room is very warm it would be perfectly proper for
20 anyone to remove his jacket if that is conducive to comfort.

21 I imagine we will have redirect after recess.

22 We will recess.

23 MR. OCKENSHAUSEN: I have one question to ask the witness.

24 BY MR. OCKENSHAUSEN:

25 Q I would like to refer you to Page 15 of your Exhibit

1 Number E, Mr. Godley. Do these purport to be the list of
2 other standard broadcast stations that provide service in the
3 area? Is that correct?

4 (No response.)

5 Q To the half millivolt?

6 A Yes, that is correct.

7 Q I ask you to look down the list until we come to
8 790, which is Number 10, KTHT.

9 A Yes.

10 Q Right after that, there is a station on 820 kilocycles
11 in Dallas, WDAP; and WFAM, should not that station also be
12 listed?

13 A Possibly.

14 Q Could you check and if it should be you will let us
15 know after recess?

16 A I will try. I don't have this pattern with me.

17 MR. OCKERSHAUSEN: It is non-directional.

18 PRESIDING EXAMINER: I assume this is something that could
19 be checked.

20 THE WITNESS: I will try.

21 PRESIDING EXAMINER: We will take a ten minute recess.

22 (Whereupon, at 3:05 p.m. a recess was taken until 3:15 p.m.)

23 PRESIDING EXAMINER: Does the Bureau have some more
24 cross-examination?

25 MR. TACY: Yes, sir, just one question.

1 BY MR. TACY:

2 Q Have you visited the site of this proposal?

3 A Yes, I have.

4 PRESIDING EXAMINER: You are talking about the Edna,
5 Texas proposal?

6 MR. TACY: Yes, sir.

7 No further questions.

XXX

8 REDIRECT EXAMINATION

9 BY MR. BOROS:

10 Q Mr. Godley, directing your attention to Cosmopolitan
11 Exhibit E-1, Page 5, would you kindly state why the nulls
12 depicted thereon are equivalent in your opinion to the nulls
13 proposed in Cosmopolitan application?

14 A I have equated the various directed patterns tabu-
15 lated on this page to the Edna proposal through the RMS field
16 of each of the arrays.

17 In other words, if the Edna array is adjusted to an RMS
18 field of 555 as proposed, 555 milivolts, we must have a null in
19 one specific location of approximately 8.55 milivolts. Now, if
20 we doubled the RMS field, the null field would similarly double.
21 So it is a direct ratio with RMS.

22 Q And the fact that there are different towers, in
23 terms of the number involved, in one case in here, does not
24 make any difference in your opinion?

25 A To the null depth no, it makes no difference.

1 Q What about the way the towers are arrayed, does that
2 make any difference?

3 A No.

4 Q Why not?

5 A The null depth is developed because of the pattern
6 configuration. Presumably with some tower arrangements there
7 would be no null, but where there is a theoretical null, the
8 depth, given proper siting and so on, the depth can be as deep
9 as any of these shown, whether there is four towers or two.

10 MR. BOROS: I direct your attention to a document which,
11 Your Honor, has been distributed to all parties. It is headed
12 "Tabulation Adjustment and Maintenance Tolerances."

13 I would like to have it marked for identification as
14 Cosmopolitan Exhibit Number 2.

15 PRESIDING EXAMINER: E-2.

16 (The document referred to was
17 marked for identification as
18 Cosmopolitan Exhibit E-2.)

19 BY MR. BOROS:

20 Q Do you have a copy of that before you?

21 A Yes, sir.

22 Q Did you prepare that?

23 A Yes, sir.

24 Q Is it true and correct?

25 A Yes, sir.

1 MR. BOROS: I offer Cosmopolitan Exhibit E-2 into evidence,
2 Your Honor.

3 PRESIDING EXAMINER: Let me be clear what this is. I
4 believe this was referred to this morning in response to some
5 inquiry by Mr. Tacy, but I am not sure what it is supposed to
6 show.

7 BY MR. BOROS:

8 Q Will you explain what it shows, Mr. Godley?

9 A It shows in the third column from the left the
10 adjustment field computed from current phase parameters which
11 will be utilized to facilitate adjustment procedure. It also
12 shows assumed end tower radiations of plus or minus three-quarters
13 of one percent in field, plus or minus one degree in phase, and
14 thereafter combinations of one-half percent in field and one-
15 half a degree in phase.

16 These variations listed in no case exceed the meov values.

17 PRESIDING EXAMINER: Was this to show what could happen
18 on each one of the azimuths shown?

19 THE WITNESS: That is correct, yes, sir.

20 PRESIDING EXAMINER: What is that second column, Mr.
21 Godley?

22 THE WITNESS: The second column is really a reference
23 more particularly for engineers. It shows the angle used in
24 the computations from the axis of the array.

25 In other words, the axis of the array is at 26 degrees

27 1 azimuth.

2 PRESIDING EXAMINER: Do you use the center tower as the
3 fixed reference point and then compute the variation from the
4 end towers?

5 THE WITNESS: Yes, sir.

6 PRESIDING EXAMINER: Does anyone have any qualifying
7 questions?

8 MR. OCKENSHAUSEN: We might, sir.

9 RECROSS-EXAMINATION

10 BY MR. OCKERSHAUSEN:

11 Q Mr. Godley, referring to the heading, on the top
12 line of your Exhibit E-2, we have the first indication of plus
13 half a degree, plus or minus half a degree, plus a half percent,
14 plus one-half degree.

15 Do you see that column?

16 A Yes, sir.

17 Q Does that mean that each of the end towers are moved
18 the same way?

19 A Yes.

20 Q Do you have any idea or do you have any example of
21 what would happen if you moved one of the end towers one way
22 and one of the other end towers the other way at the same time?

23 A Yes.

24 MR. BOROS: I object, this is something not in evidence.

25 MR. OCKERSHAUSEN: We are simply asking him questions

1 based on this exhibit.

2 PRESIDING EXAMINER: I think it is a proper question.

3 THE WITNESS: Yes, the extreme righthand column shows
4 the Number One tower, varied plus one-half percent in field
5 and minus one-half degree in phase, while the Number 3 tower
6 if varied would be plus one-half percent in field and plus
7 one-half degree in phase, and this is believed to be the extreme
8 condition with this amount of variation.

9 MR. OCKERSHAUSEN: That is what I wanted.

10 We have no further questions.

11 PRESIDING EXAMINER: Are there any objections to the
12 Exhibit?

13 MR. TACY: I have a question on this.

14 BY MR. TACY:

15 Q. Mr. Godley, in Column 3 under the title "Adjustment
16 Field, Milivolts Per Meter," are these studies primarily based
17 upon the figures contained in that column?

18 A. Yes.

19 Q. Well, now again referring to Column 3, are these the
20 figures that will be filed with the Commission?

21 A. No, they will not be filed with the Commission.

22 Q. Did you testify this morning that these figures were
23 going to proximate 90 percent of the meov?

24 A. The proof of performance field will proximate 90
25 percent of the meov.

1 MR. TACY: Mr. Examiner, on the basis of this witness's
2 testimony, I would object to the exhibit as being based on
3 figures that are really fictitious. From the witness's own
4 testimony they are not to be used in this case.

5 PRESIDING EXAMINER: I am not quite sure I understand what
6 these figures are, Mr. Godley. Could you explain again just
7 what they represent?

8 THE WITNESS: These figures in the third column are an
9 adjustment field computed from current and phase parameters
10 which will be utilized to facilitate the adjustment procedure,
11 and while the adjustment aim will be directed at these fields
12 the proof of performance must necessarily include some of
13 these variations shown, or have room for some of these varia-
14 tions shown.

15 PRESIDING EXAMINER: I am not quite sure what you mean by
16 their being fictitious, Mr. Tacy.

17 MR. TACY: They are at complete variance from the applica-
18 tion. They are completely different parameters in this third
19 column that appears in his application and his testimony again
20 this morning was that actually, as we understood it, at least that
21 what was to be filed with the Commission here -- on proof of
22 performance I am talking about now -- would be approximately 90
23 percent of the maov figures, and of course would have nothing to
24 do with the remainder of the exhibit on these variations.

25 MR. BOROS: May I ask the witness a question which may

30 1 clarify this?

XXXX 2 REDIRECT EXAMINATION

3 BY MR. BOROS:

4 Q Could you state the relationship between three figures
5 irrespective of what appears on Cosmopolitan Exhibit No. E-2?
6 Here are the three types of figures which I have in mind. The
7 meov, the adjustment field and what will be filed with the
8 Commission by way of a proof of performance. Is any relation-
9 ship between or among those three categories and if so, could
10 you state what it is?

11 A Yes. The meov is or are maximum expected operating
12 values which are shown on the polar pattern in Figure 2 of
13 Exhibit E. These were fixed before I entered the case and
14 upon study of the situation I found that I would go about
15 adjusting this array from Column 3 of Exhibit E-2, using these
16 parameters rather than those shown in the original filing.

17 On this basis I come up with these adjustment fields which
18 meet the requirements better. From the adjustment point of
19 view it is going to be much simpler for me to meet these
20 requirements using these parameters to start with.

21 Q Have you completed your answer with respect to what
22 you will finally file with the Commission with regard to proof
23 of performance?

24 A The proof of performance field will, in order to
25 permit some of these variations shown, be set at values

1 approximately 10 percent under meov fields.

2 MR. TACY: May I go ahead now?

XXXXX 3 RECROSS-EXAMINATION

4 BY MR. TACY:

5 Q Then do I understand, as a matter of fact, the figures
6 that we find in Column 3 which you have explained in your note,
7 that the array will never function at these figures? Is that
8 correct?

9 A No, I do not believe you can say that necessarily.

10 Q At what times will these figures be correct as to the
11 functional operation of this array?

12 A These figures are a target adjustment field. And this
13 is what we will shoot for in the adjustment of the array.

14 But in order to be practical about the thing, assuming we
15 come up with these exact theoretical fields, we will upset the
16 array sufficiently to fill in the field to within about 10
17 percent of meov.

18 MR. TACY: I think, Mr. Examiner, the witness's last
19 answer is a ground for our objection.

20 MR. OCKERSHAUSEN: Mr. Examiner, I too, think the more I
21 hear the answer the more I doubt the relevance of this exhibit.
22 I cannot tie it in at all.

23 PRESIDING EXAMINER: I think what is bothering Mr. Tacy is
24 the same thing that bothers me, Mr. Godley, and maybe he just
25 has not asked the proper question.

1 Are these simply interesting figures that show relationships or do they have some practical connection with the array
2 in operation?

3 In other words, if you know right now that the final
4 adjustment will be within 10 percent of the meov, of what
5 consequences are these figures?

6 THE WITNESS: These figures?

7 PRESIDING EXAMINER: In other words, what finding would I
8 make in an Initial Decision based on these figures?

9 THE WITNESS: These figures are a theoretical pattern about
10 which the adjustment is going to be made.

11 PRESIDING EXAMINER: Are these the minimum field that you
12 would expect on each of these angles?

13 THE WITNESS: These are the minimum fields that I could
14 expect, yes, sir.

15 PRESIDING EXAMINER: Then you will adjust upwards from
16 those?

17 THE WITNESS: I will either adjust upwards or allow for
18 some variations and file on that basis.

19 PRESIDING EXAMINER: If you did adjust upwards to this
20 figure which is within 10 percent of the meov, then what
21 meaning will these last few column have of the variation in
22 phase and current?

23 THE WITNESS: Well of course these variations are a
24 theoretical study and we are attempting to equate this to an

gr333 1 exact field condition which is not always possible.

2 PRESIDING EXAMINER: Let me put it this way: Let us just
3 take the first azimuth, 341 degrees. Your adjustment field is
4 39.7 mv/m. Now if I understand you correctly, the figure for
5 that azimuth in your final adjustment will be somewhat higher.
6 That being the case, what significance can we draw from these
7 various computations showing variation in phase and current?

8 THE WITNESS: Well, this is a theoretical situation in
9 the same manner as any theoretical pattern relates to meov.

10 PRESIDING EXAMINER: What I am getting at is this: Wouldn't
11 the figure that you show in these last four or five columns
12 then become irrelevant, since they are based on a computed
13 field which will not exist?

14 THE WITNESS: No, I don't believe that at all because it
15 might -- let us look at for instance the last column and
16 make an assumption that from the theoretical parameters at
17 which we aimed we have the variations shown at the head of the
18 column, and it might perhaps be that the last column already
19 has included some variations of this sort into it at the time
20 of the proof.

21 PRESIDING EXAMINER: Does anyone else have any questions?

22 (No response.)

23 MR. TACY: Mr. Examiner, I believe that we understand what
24 the witness means by this exhibit. And I believe his testi-
25 mony is clarified to us to the degree that his commitments are

1 are clear and we would have our objection stand, not being of
2 any evidential value in this proceeding.

3 PRESIDING EXAMINER: That is my problem, Mr. Boros.
4 Perhaps I missed something, but I cannot understand what possible
5 findings of fact I could make based on this exhibit.

6 MR. BOROS: One of the questions in issue is to determine
7 whether the directional antennas system proposed by the
8 applicant can be adjusted and maintained as proposed.

9 This material goes to showing the initial adjustment of
10 the antenna system and shows the steps taken by this witness
11 or which he proposes to take in his expertise to develop
12 initially his array. It certainly is one of the series of
13 steps leading to the conclusion which we propose; that we
14 would be able to install this thing and operate it.

15 PRESIDING EXAMINER: I understand that, but then he also
16 says that he is going to have a different set of field measure-
17 ments for the final adjustment.

18 MR. BOROS: Yes, and I understand in order to avoid -- I
19 don't want to characterize his testimony, since I object to
20 other counsel doing it -- he stated on the record why he
21 intended to do it and why he intends to come up with an easier
22 figure to live with.

23 PRESIDING EXAMINER: The best I can say is this: I think
24 it is harmless. I don't think it is going to prejudice any
25 other party, but at the moment I cannot see the materiality

1 of any of these columns.

2 MR. BOROS: I know the Broadcast Bureau was anxious to
3 elicit this for whatever purpose it could deem to serve for
4 clarification. Now I gather there is a different viewpoint.

5 We have been alerted to this problem and we believe it
6 will serve to clarify things, but I won't contend further.

7 PRESIDING EXAMINER: Normally I don't like to receive
8 things for what they are worth, but since this is only one
9 page it is not going to clutter up the record and I will
10 receive Exhibit E-2 and you can make any argument from it
11 in your proposed findings.

12 THE WITNESS: Could I add something that might help here?

13 PRESIDING EXAMINER: If you can add anything that will
14 clarify the situation I would appreciate it.

15 THE WITNESS: I might say that the conventional thing for
16 me to say would be that the adjustment field is what the proof
17 will be. But having been in this business so long, I know this
18 would be the wrong thing to do for my client. So I am proposing,
19 in actual practice, to come up with slightly differential
20 fields.

21 PRESIDING EXAMINER: All right.

22 THE WITNESS: And I think here it has confused you
23 because I have been sufficiently honest to say that while this
24 is the theory and the conventional thing is to adjust to it,
25 from a practical point of view I would not impose this on my

1 client.

2 PRESIDING EXAMINER: Your integrity has gotten the exhibit
3 in, even if it is confusing.

4 (The document heretofore marked
5 for identification as Cosmopolitan
6 Exhibit E-2 was received in
7 evidence.)

XXX 8 FURTHER REDIRECT EXAMINATION

9 BY MR. BOROS:

10 Q Directing your attention to Exhibit E, would you
11 kindly look at Figure 2?

12 A Yes, sir.

13 Q Does that show low values over a large arc?

14 A Well, we have really the minimum value only at one
15 point and the arc minimum field is not great, and over most
16 of the null zone, or over more than half of the null zone, the
17 meov field is considerably greater than the minimum.

18 PRESIDING EXAMINER: Could you state what the arc is,
19 just so we have it in the record?

20 THE WITNESS: The arc of minimum field is approximately,
21 let us assume two degrees. Now let us give absolute values.
22 The fields greater than 15 milivolts occur over an arc of
23 approximately 50 degrees. The fields below 15 milivolts occur
24 over an arc of only about 30 degrees. And fields below 10 miliv-
25 olts occur over an arc of approximately 3 degrees, demonstrating

1 issue? Quite clearly it must not be, or is not reasonably to
2 be held to be, the insurer of his proposal. We are dealing
3 with here a very complicated collection of scientific prin-
4 ciples and just plain pragmatic experience. Short of actually
5 building the station and taking a proof of performance it is not
6 possible to predict with exactitude what the results of any
7 given combination of phase and base current ratio will produce.

8 Nevertheless, the Commission has held, and very recently,
9 that such an absolute standard is not to be applied and here
10 I would refer to the Commission's Memorandum Opinion and Order
11 of August 21, 1968, just less than two weeks ago, in the case
12 of Gordon Broadcasting of San Diego, Inc., File No. BP-17788,
13 a Commission release bearing FCC 68-832. I don't believe it
14 has been reported in the FCC reports or Pike & Fischer. Never-
15 theless, this Memorandum Opinion and Order involves the
16 question of the adequacy of the antenna protection to the same
17 dominant station presented in this case, KWKH, Shreveport,
18 Louisiana.

19 There the Commission denied petitions to deny filed by
20 KWKH and concluded with this statement from paragraph 9:

21 "After carefully considering all data presented we find
22 that the applicant has reasonably established that adjustment
23 and operation of the proposed antenna arrays within limit of
24 radiation proposed is feasible and that no interference will
25 result to KWKH."

13.3.

2 MR. POTTS: On zero maximum allowable is 13.3. On 5 --
3 it was in both cases.

4 MR. SLOANE: You were speaking of the azimuth ± 2 degrees?

5 MR. POTTS: Two degrees, six, was a showing of vector
6 variations that was submitted in rebuttal by KWKH. I believe
7 the record shows that really was the worst and least favorable
8 to Mr. Huntley.

9 MR. SLOANE: It would exceed the maximum allowable on either
10 side of that azimuth?

11 MR. POTTS: No, sir.

12 MR. SLOANE: Didn't you say the variation would increase
13 to 13.4?

14 MR. POTTS: No, sir. On 2 degrees if we vary 1 per cent
15 in .6 of a degree, MEOV would be exceeded by 2.6.

16 MR. SLOANE: Yes. Also the maximum value was 13.3.
17 Isn't it?

18 MR. POTTS: The maximum is 13.3. Now the computed pattern,
19 which is the pattern to which we would adjust, at zero, is
20 only 8.75.

21 MR. SLOANE: Yes, but in your answer to Mr. Berkemeyer's
22 question you said it would not cause interference.

23 MR. POTTS: Yes, sir.

24 MR. SLOANE: I think that table indicating a maximum
25 allowable as the value it can not be exceeded without causing

1 interference.

2 MR. POTTS: That is correct. But on zero degrees the
3 showing which does appear in Table 3, to Huntley Exhibit 1,
4 shows that on zero degrees and five, the 2 degree falling in
5 between presumably, that the computed pattern, which is the
6 adjusted, is 8.75 millivolts per meter with a maximum per-
7 missible of 13.3. On five it is 8.47 millivolts per meter
8 with a maximum permissible of 13.3.

9 Now, taking the adjustments, all the variations which
10 are shown through 14 combinations of variations of phase
11 and base current ratio, which are shown in that exhibit, at
12 no time does the resultant vector exceed 13.3.

13 MR. SLONE: Based upon those variations.

14 MR. POTTS: On these variations, yes, sir.

15 Now just assuming, and I frankly don't think that the
16 record shows this exactly, although we probably could find
17 out by looking at the KWKH showing --

18 MR. SLONE: I think that answers the question I had.

19 MR. POTTS: Yes. I believe when you add the 2.68 milli-
20 volts to the calculated you do not exceed the maximum
21 permissible.

22 MR. BERKEMEYER: Any further questions of Mr. Potts?

23 Thank you, Mr. Potts.

24 Mr. Ockershausen.

25

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Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554

In re Applications of

COSMOPOLITAN ENTERPRISES, INC.
Edna, Texas

Docket No. 16572 ✓
File No. BP-16347

Requests: 1130kc, 10kw, DA, Day, Class II

H. H. HUNTLEY
Yoakum, Texas

Docket No. 16573
File No. BP-16570

Requests: 1130kc, 10kw, DA, Day, Class II

For Construction Permits

MEMORANDUM OPINION AND ORDER

By the Commission: Commissioner Loevinger absent.

1. The Commission has before it for consideration (a) the above-captioned and described applications and the amendments thereto; (b) the petition filed by Cuero Broadcasters, Inc., licensee of Station KCFH, Cuero, Texas, opposing the H. H. Huntley application; (c) a petition filed on December 11, 1964 by International Broadcasting Corporation, licensee of Station KWCH, Shreveport, Louisiana, against the Cosmopolitan Enterprises, Inc., application; and (d) petitions filed by International Broadcasting Corporation on August 18, 1964, December 10, 1964, and March 11, 1965, against the H. H. Huntley application as well as a pleading entitled "Reply to Opposition to Further Petition To Designate Application for Hearing" filed April 27, 1965, with engineering affidavits annexed thereto.

2. The applications of Cosmopolitan Enterprises, Inc., and H. H. Huntley proposed first transmission services for Edna and Yoakum, Texas, respectively, and are mutually exclusive in that simultaneous operation of both proposals would result in mutually destructive interference. On August 24, 1964, Cuero Broadcasters, Inc., licensee of standard broadcast Station KCFH, Cuero, Texas 1/, filed a petition opposing the Huntley proposal and requesting to be made a party to a hearing on the application. In its petition, Cuero states broadly that the granting of the Huntley proposal would be highly detrimental to the public interest, convenience, and necessity due to the fact that 1) the population in the area is declining, 2) the average income of the residents of the area is below the national average, 3) Cuero's program service is based on its survey in 1962 of the needs of the area and, if the Huntley application is granted, the station cannot meet its commitment to serve those needs, 4) the staff of KCFH is highly experienced and serves the Yoakum Chamber of Commerce, the Yoakum public schools and the community in general, including assistance to the Civil Defense Authority.

✓ According to KCFH, the distance between Cuero and Yoakum is 17 miles.

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3. In view of the fact that Cuero and the proposed station would be in direct competition, the Commission finds that Cuero has standing ^{2/} but its general conclusions are not supported by sufficient factual allegations or adequate detailed information to raise a substantial question as to the ability of the area to support another broadcast station without loss or degradation of service to the public. Moreover, Cuero does not show the specific relationship between any assumed losses in revenue to the withdrawal of particular programs or program service. Accordingly, the Commission finds that Cuero has not raised an issue which would require a hearing on the question of whether the area can support an additional broadcast station. Harri-
man Broadcasting Co., 2 FCC 2d 320, 6 RR 2d 709 (1966); Autus Johnson, (FCC 65-203 released February 24, 1966) 2 FCC 2d 620, _____ RR _____ (1966); Missouri-Illinois Broadcasting Co., 1 RR 2d 1 (1963); Tree Broadcasting Co., 1 RR 2d 15 (1963). The petition in opposition to the application of H.H. Huntley, filed by Cuero Broadcasters, Inc., will therefore be denied.

4. To each of the numerous amendments to the application tendered by H.H. Huntley, KWKH has objected on the same grounds of their objections to the Cosmopolitan proposal, namely that the proposed 0.005 mv/m contours would fall relatively close to the KWKH normally protected 0.1 mv/m contour on the basis of the proposed MEOV's; that each applicant proposes to suppress the proposed 10 kilowatts of power to critically low values in the general direction of KWKH (Cosmopolitan and Huntley propose MEOV's as low as 8.9 and 10.3 mv/m, respectively, for 10kw of power); that minor variations in the operating parameters of each proposal would cause the proposed MEOV's to be exceeded. Since studies of these proposals indicate that protection to KWKH is critical and in view of the degree of signal suppression proposed, the Commission finds that a substantial question exists as to whether the applicants will be able to adjust and maintain the antenna systems as proposed, and whether adequate protection will be afforded KWKH.

5. KWKH has also objected to the Huntley proposal on financial grounds, adopting at first the allegations of Cuero that the Yoakum market is already served by KCFH, thus raising the question of whether the area can support both stations and later, referring to the engineering amendments of Huntley which it is alleged will require additional funds for construction not taken into account by Huntley's financial data.

6. In the Cuero petition it is alleged that Huntley's predicted revenues are inaccurate and this contention is adopted by International Broadcasting Corporation who, in addition, allege that in view of the increased expenses involved in Huntley's constructing, adjusting, maintaining and monitoring the proposed array due to the extreme suppression required, he has not demonstrated that he is financially qualified to meet these costs in addition to those of the construction and operation of the station. It is further alleged that the amendment of Huntley requesting 10kw will require additional funds to construct the station, and that this fact was not taken into account by Huntley's construction estimates. Examination of Huntley's application discloses that he has more than enough money available to construct and operate the proposed station for a period of one year ^{3/} and both Cuero and International do not present

^{2/} FCC v. Sanders Brothers Radio Station, 309 US 470 (9 R.R. 2008)

^{3/} Ultravision Broadcasting Co., et al, 5 RR 2d 343

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sufficient information either on the factor of increased construction costs or the additional funds necessary to construct, adjust, maintain and monitor the proposed array to raise any substantial and material question of fact in this regard. Similarly, the Commission has examined the financial data provided by the applicant, Cosmopolitan Enterprises, and finds that this applicant also has the necessary funds to meet the Ultravision standard.

7. From the information before the Commission it appears that except as indicated by the issues below the applicants are qualified to construct, own and operate the proposed stations; however, in view of the fact that the applications are mutually exclusive in that operation by the applicants as proposed would result in mutually destructive interference; and in view of the foregoing, the Commission is unable to make the statutory finding that a grant of the subject applications would serve the public interest, convenience, and necessity, and is of the opinion that the applications must be designated for hearing in a consolidated proceeding on the issues set forth below:

Accordingly, IT IS ORDERED, That pursuant to Section 309(e) of the Communications Act of 1934, as amended, the applications ARE DESIGNATED FOR HEARING IN A CONSOLIDATED PROCEEDING, at a time and place to be specified in a subsequent Order, upon the following issues:

1. To determine the areas and populations which would receive primary service from each of the proposals and the availability of other primary service to such areas and populations.
2. To determine whether the directional antenna systems proposed by the applicants can be adjusted and maintained as proposed.
3. To determine in light of the evidence adduced under the preceding issue whether either proposal would provide adequate protection to Station KWKH, Shreveport, Louisiana.
4. To determine, in the light of Section 307(b) of the Communications Act of 1934, as amended, which of the proposals would better provide a fair, efficient and equitable distribution of radio service.
5. To determine, in the light of the evidence adduced pursuant to the foregoing issues which, if either, of the applications should be granted.

2. IT IS FURTHER ORDERED, That the petition filed by Cuero Broadcasters, Inc. IS DENIED.

3. IT IS FURTHER ORDERED, That, the International Broadcasting Corporation, licensee of Station KWKH, IS MADE A PARTY to the proceeding and that its petitions filed against both applicants ARE GRANTED to the extent indicated herein and ARE DENIED in all other respects.

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- 4 -

4. IT IS FURTHER ORDERED, That in the event of a grant of either of the applications in this proceeding, the construction permit shall contain the following condition:

Pending a final decision in Docket No. 14419 with respect to pre-sunrise operation with daytime facilities, the present provision of Section 73.87 of the Commission's Rules are not extended to this authorization, and such operation is precluded.

5. IT IS FURTHER ORDERED, That, to avail themselves of the opportunity to be heard, the applicants and party respondent herein, pursuant to Section 1.221(c) of the Commission's Rules, in person or by attorney, shall, within 20 days of the mailing of this Order, file with the Commission in triplicate, a written appearance stating an intention to appear on the date fixed for the hearing and present evidence on the issues specified in this Order.

6. IT IS FURTHER ORDERED, That, the applicants herein shall, pursuant to Section 311(a)(2) of the Communications Act of 1934, as amended, and Section 1.594 of the Commission's Rules, give notice of the hearing, either individually or, if feasible and consistent with the Rules, jointly, within the time and in the manner prescribed in such Rule, and shall advise the Commission of the publication of such notice as required by Section 1.594(g) of the Rules.

FEDERAL COMMUNICATIONS COMMISSION

Ben F. Waple
Ben F. Waple
Secretary

Adopted: April 6, 1966

Released: April 11, 1966

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Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D. C. 20554

FCC 67D-41

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In re Applications of)
COSMOPOLITAN ENTERPRISES, INC.) DOCKET NO. 16572
Edna, Texas) File No. BP-16347
H. H. HUNTLEY) DOCKET NO. 16573
Yoakum, Texas) File No. BP-16570
For Construction Permits)

Appearances

J-rome S. Boros and Edward L. Smith on behalf of Cosmopolitan Enterprises, Inc.; William J. Potts, Jr. on behalf of H. H. Huntley; Harry J. Ockershausen on behalf of International Broadcasting Corporation; and Vergil W. Tacy on behalf of Chief, Broadcast Bureau, Federal Communications Commission.

INITIAL DECISION OF HEARING EXAMINER H. GIFFORD IRION
Issued August 7, 1967; Released August 9, 1967

Preliminary Statement

1. These applications were designated for hearing by the Commission in an order released April 11, 1966. Cosmopolitan seeks a construction permit for a new standard broadcast station to operate on 1130 kilocycles, with 10 kilowatt power, daytime only, at Edna, Texas. Huntley likewise seeks a construction permit for a new standard broadcast station using the same facilities at Yoakum, Texas. The Commission found both applicants to be legally, financially, technically and otherwise qualified, except as to certain matters shown below in the issues, but since the two proposals would result in mutually destructive interference, they were consolidated for hearing.

2. International Broadcasting Corporation, licensee of Station KWKH Shreveport, Louisiana (1130 kc, DA-N) was made a party respondent. The hearing issues were stated as follows:

1. To determine the areas and populations which would receive primary service from each of the proposals and the availability of other primary service to such areas and populations.

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2. To determine whether the directional antenna systems proposed by the applicants can be adjusted and maintained as proposed.
3. To determine in light of the evidence adduced under the preceding issue whether either proposal would provide adequate protection to Station KWKH, Shreveport, Louisiana.
4. To determine, in the light of Section 307(b) of the Communications Act of 1934, as amended, which of the proposals would better provide a fair, efficient and equitable distribution of radio service.
5. To determine, in the light of the evidence adduced pursuant to the foregoing issues which, if either, of the applications should be granted.

3. Following a prehearing conference on May 4, 1966, hearings were held on various dates in July, October and November. The record was closed on November 15, 1966 but was reopened on June 8, 1967 to receive an amendment to Huntley's application and was thereupon closed. Proposed findings of fact and conclusions were filed by all of the parties, including the respondent and the Broadcast Bureau.

Findings of Fact

Communities Involved

4. Edna, Texas with a 1960 population of 5038^{1/} is the county seat and largest city in Jackson County, Texas. Jackson County had a 1960 population of 14,040.

5. Edna is governed by a mayor and city council under a home rule form of government and provides the usual municipal services such as police, fire, schools and recreation. Some of these services are delivered to persons residing outside the city limits upon payment of a fee. According to Mr. Tinker, the Mayor of Edna, records of the city's water department indicated that the population of Edna in 1966 was approximately 6000. The census reports indicate a steady population growth for both Edna and Jackson County, and the school population of Edna has likewise experienced steady growth since 1962.

^{1/} All population figures are taken from the 1960 United States Census unless otherwise noted.

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6. There are two meat processing plants in Edna just beyond its city limits and also a welding company. The city has three banks and the usual civic, social and fraternal organizations. While Edna has one weekly newspaper, neither it nor Jackson County has an AM, FM or TV station within its boundaries. The estimated labor force of Edna is 4,400 persons.

7. Plans have been made by the U. S. Bureau of Reclamation to construct a dam and reservoir a few miles from Edna, but at the close of the hearing this proposal had only advanced to the stage of a bill being introduced into the House of Representatives.

8. Yoakum with a 1960 population of 5,761 is located on the boundary of two Texas counties. Approximately 70% of the city is in Lavaca County and the remaining 30% is in DeWitt County. It is like Edna in having home rule and in having no assignment of an AM, FM or TV station. Yoakum is not a county seat since Cuero is the seat of DeWitt County and Hallettsville is the seat of Lavaca County. Station KCFH is situated in Cuero.

9. While Yoakum is located in an agricultural area in which stock raising is an important activity, there are within the city several companies which tan leather and manufacture leather products. About 150 persons are employed in packing plants and vegetable canning. Yoakum has one newspaper which appears three times weekly. It has its own school and municipal hospital and churches of various denominations. A district office of the Texas highway department is located there and small offices of other state agencies are situated in Yoakum. The local authority has been working with the U. S. Bureau of Reclamation for the location of a dam approximately 15 miles from Yoakum, but the record does not indicate that any definitive steps have been taken toward authorizing the dam. Census figures show a slight increase in population from 1940 to 1960, but there has been a population loss during the same period in both DeWitt and Lavaca Counties. Yoakum has an estimated labor force of 3,160 persons and has three banks.

Proposed Coverage

10. The two applicants each propose a 10 kw station on 1130 kc at Edna and Yoakum, respectively. Each station would operate daytime only and employ a directional antenna. Yoakum and Edna are 35 miles apart and are both in southeast Texas.

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Cosmopolitan Coverage

11. Cosmopolitan's proposed station, based on calculated radiation values specified for the directional antenna and ground conductivity values from Figure M-3 of the Rules, would provide primary service as shown in the following table:

<u>Contour</u>	<u>Area (Sq. Mi.)</u>	<u>Population</u>
2.0 mv/m	7,795	166,768
0.5 mv/m	18,100	334,702

All of the area within the proposed 0.5 mv/m contour is served by three existing stations. Portions are served as follows:

5 stations	75-100%
1 station	50-75%
22 stations	25-50%
44 stations	less than 25%

The minimum of existing services to any portion of the area is 12 and the maximum is 29.

12. The city of Edna, Texas itself receives primary service from eight existing stations. There are at least five primary services (2.0 mv/m or more) to the communities of Mallettsville, Palacios and Port Lavaca which are communities of at least 2500 persons within the proposed 2.0 mv/m contour. Three other communities with urban populations within this contour (Cuero, Victoria and Yorktown) now receive primary service from nine stations. Cosmopolitan would bring the first local outlet to Edna.

Huntley Coverage

13. Yoakum is neither a county seat nor a part of any urbanized area. It is situated about 16 miles north of Cuero which has one AM station and is the county seat of DeWitt County. Using the calculated values of radiation specified for the proposed directional antenna and ground conductivity values from Figure M-3 of the Rules, the expected coverage of Huntley's station is shown in the following table:

<u>Contour</u>	<u>Area (Sq. Mi.)</u>	<u>Population</u>
2.0 mv/m	9,480	171,217
0.5 mv/m	20,914	357,010

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14. Primary service is provided to the entire area within the proposed 0.5 mv/m contour by three existing stations. Portions are served as follows:

4 stations	75-100%
2 stations	50-75%
25 stations	25-50%
35 stations	less than 25%

Portions of this area will thus receive a minimum of nine primary signals and a maximum of 25.

15. The maximum number of primary signals to the urban community of Victoria within the proposed 2.0 mv/m contour is nine. Within the same contour the urban community of Port Lavaca receives a minimum number of five primary services. Eight daytime primary services are now available to the city of Yoakum itself.

Directional Antenna Issue and Protection to Station KWKH (Issues 2 and 3)

16. In the Memorandum Opinion and Order which designated this case for hearing, the Commission took notice that both applicants proposed to suppress radiation in the direction of KWKH to critically low values and stated that minor variations in the operating parameters of each proposal would result in exceeding the proposed MEOV of each station. Therefore the Commission felt that a substantial question existed as to whether the applicants would be able to adjust and maintain antenna systems as proposed and whether adequate protection would be afforded to KWKH.

17. Station KWKH operates on 1130 kc/s with 50 kw power, directionalized at night, in Shreveport, Louisiana. It is a Class I-B station. Both Yoakum and Edna are located approximately 295 miles southwest of Shreveport. The 0.1 mv/m contour of KWKH over the pertinent arc south and southwest of Shreveport established by field strength measurements made in 1940 and 1941 lies at distances from the transmitter varying from 150 miles to 225 miles depending on the direction. In 1966 Cosmopolitan's consulting engineer made field strength measurements along stub radials which show some contraction of the aforementioned contour. This, however, does not occur in the area where either Cosmopolitan's or Huntley's 0.005 mv/m contour approaches most closely to the KWKH 0.1 mv/m contour. In the case of either proposal and predicated upon use of the specified MEOV and ground conductivities derived from Figure M-3 of the rules, both of the proposed 0.005 mv/m contours would fail to reach the 0.1 contour of KWKH. Nevertheless, the proximity would be close in

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either case. At its closest approach Cosmopolitan's 0.005 mv/m contour would fall short of the KWKK 0.1 mv/m contour by about six miles and the comparable contours under the Huntley proposal would be separated by no less than three miles.

Cosmopolitan Directional Antenna

18. The directional antenna system proposed by Cosmopolitan will consist of three uniform cross-section, guyed, vertical radiators spaced 363 feet (150 degrees electrical) on a line bearing 26 degrees true. Each tower will be base-insulated and have a height above insulator of 220 feet (91 degrees electrical). The ground system will consist of 120 copper wire radials 218 feet long (approximately one quarter wavelength) about the base of each tower. Overlapping radial wires between towers will be bonded to transverse copper straps. A 48 foot by 48 foot expanded copper ground screen at the base of each tower will minimize changes in base capacity that might result from temperature and moisture changes in the soil. Additionally, in order to eliminate any possibility of variations that might be caused by vegetation, growth in the ground screen areas will be controlled completely by chemical means and mowed in the ground system areas beyond the screens. The fences required to prevent unauthorized access to the towers will be constructed of fiberglass and will have no effect on the operation of the directional antenna system.

19. The design and construction of the antenna system contemplates the use of thin triangular cross-section towers fabricated of hot-dipped galvanized sections field welded to adjacent sections in order to prevent corrosion and minimize ohmic loss. The use of a thin tower will permit the current distribution to approach theoretical and guying the towers with Glastron fiberglass epoxy line, which is non-conducting and nonmagnetic, will not only eliminate any possibility of reradiation from the guy lines but will also avoid all chance of capacitive loading which might affect the current distribution on the towers. Electric power for tower lighting will be brought across the base insulator by means of an Austin-type transformer so as to minimize base loading and provide the most stable method of tower lighting. Tower lighting cable will be routed inside the tower to prevent any possibility of variations in current distribution or impedance. The beacon lights atop the tower will be shielded by lightning rods to protect the beacons and to minimize possible top loading variations that might result from lamp failure or conductive moisture or dirt accumulations on the glass housings.

20. Transmission lines, sampling lines, signal, and power circuits will be carried in protective Orangeburg or Transite conduits

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buried 12 to 18 inches beneath the soil surface. Burial of these lines will also avoid variations which might be caused by uneven or rapid temperature changes. Oversize 1-5/8 inch diameter flexible air dielectric coaxial transmission lines will be used in continuous lengths to eliminate any problems which might be encountered with intermediate joints. These transmission lines, jacketed for additional mechanical protection, will have an average power rating of 150 kilowatts at the proposed station's operating frequency. Use of the transmission line here proposed will minimize variations that might be caused by the power flow to each tower and will provide more permanent and trouble-free service. Sampling lines will be of equal length air-dielectric coaxial cable of the best quality.

21. Phasing and tower impedance matching components will be housed at each tower in an insulated fiberglass tuning house equipped with thermostatically controlled electric heat and air conditioning so that all inductors, capacitors, meters, etc., housed in the unit will remain at a nearly fixed temperature and thereby essentially eliminate variations that might be caused by ambient temperature changes. All phasing and power dividing components in the transmitter building will be maintained at room temperature by climate control facilities. The phasing, matching, and power dividing components to be used in this installation will be designed with excess ratings and for maximum stability. Variable vacuum capacitors will be utilized throughout to circumvent the need for rolling, sliding, or friction contacts associated with the usual inductive components. All interconnections will be made of semi-hard copper tubing to eliminate the possibility of variations that might be encountered with flexible strappings and no relays will be utilized in the radio frequency circuits.

22. Cosmopolitan's consulting engineer, like those for both Huntley and KWKK, is a man with many years of engineering experience, including the design and adjustment of directional antennas. It is his opinion that the Cosmopolitan antenna design has certain inherent favorable characteristics. For example, the rather wide spacing (0.416 wave length) between the three quarter-wave towers results in smaller mutual coupling impedances. Base operating resistances for the several towers are high: 22.95 ohms for Tower No. 1, 40.52 ohms for Tower No. 2, and 58.95 ohms for Tower No. 3. Small ohmic variations which might be caused by temperature changes, condensation, or changes in soil moisture were considered by him to be relatively insignificant when compared with the large operating resistances. Furthermore, these natural changes would be expected to affect all towers simultaneously creating little chance for variations between individual tower currents and phase. Also, by virtue of their inverse square root relationship, the high base operating resistances mean smaller tower feed currents,

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thus providing for lower power losses in the array resistances found in antenna systems. The largest tower base current will be on the order of 12.5 amperes and the overall system losses, assuming one ohm per tower, will be less than 240 watts. This low total loss (about 2.5%) indicates, in his view, that there will be a minimum of circulating currents, a factor that tends to enhance the system's stability.

23. The antenna current ratios and phase parameters specified for Cosmopolitan's directional antenna system are as follows:

<u>Tower</u>	<u>Current Ratio</u>	<u>Phase</u>
1 (Northeast)	0.5335	+49.1°
2 (Center)	1.0	0°
3 (Southwest)	0.4916	-49.1°

Excitation of the antenna system in accordance with the above will produce a symmetrical figure 8 radiation pattern that is not entirely closed at the center and with the main radiation lobes broadside to the line of towers. One lobe is directed to the northwest and the other to the southeast. Each of these lobes attains a maximum field of 950 mv/m. Along the line of towers to the southwest the center is expanded and reaches a value of 380 mv/m. In the northeast direction toward KWKH, the radiation pattern is deeply suppressed over an arc from 341 degrees to 71 degrees true. In this arc there are three small lobes and four minima. The center lobe of the three lies along the line of towers and has a maximum calculated value of 16.1 mv/m. The other two lobes are smaller and fall 30 degrees on either side of the center lobe. These two smaller lobes reach their maximum calculated value of 11.7 mv/m at 356 degrees and 56 degrees true. The four minima of radiation are symmetrically disposed: two of the minima have values of 5.8 mv/m at 15 degrees either side of the line of towers and the other two have values of 5.6 mv/m at 20 degrees removed from the line of towers. Assuming an operating loss of one ohm per tower, the proposed array will develop an RMS of 555 mv/m for a power of 10 kilowatts (or 175.5 mv/m for one kilowatt).²⁷

24. The following values of radiation are specified in the horizontal ground plane over the arc of suppression toward KWKH:

<u>Azimuth</u>	<u>Calculated Field</u>	<u>MEOV</u>
341°	33.6 mv/m	48.5 mv/m
346	8.8	17.0
351	7.6	11.9
356	11.7	12.2

(Table Continued on Next Page)

²⁷ Section 73.189(b)(2) of the rules requires that the RMS of a Class II station (as here proposed) be not less than 175 mv/m for one kilowatt.

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<u>Azimuth</u>	<u>Calculated Field</u>	<u>MEOV</u>
1°	9.6 mv/m	11.4 mv/m
6	5.6	9.5
11	5.8	10.7
16	10.4	13.5
21	14.1	17.0
26	16.1	20.0
31	14.1	20.0
36	10.4	17.5
41	5.8	15.5
46	5.6	15.0
51	9.6	18.2
56	11.7	20.5
61	7.6	20.7
66	8.8	19.0
71	33.6	50.0

Cosmopolitan's consulting engineer asserts that he can adjust the proposed directional antenna to or very close to the above-specified calculated field values of radiation.

25. Starting initially with the Cosmopolitan antenna system adjusted to conform to the calculated values of radiation, a variation in phase of the center reference tower by plus or minus 1° or in current magnitude by plus or minus 1%, would result in radiation exceeding the MEOV in the directions 351, 356, 1, 6, 11, 16, 21 and 26 degrees true. If the current magnitudes and phases of the two end towers were to vary by 1% and 1°, respectively, with respect to the center tower, then under the most adverse condition radiation in the critical direction of 356 degrees true would increase from a calculated value of 11.7 mv/m to 18.7 mv/m, or 6.5 mv/m in excess of the specified MEOV of 12.2 mv/m. Since Cosmopolitan intends to hold relative parameter variations to at least 0.5% in field and 0.5° in phase, effects of variation within this range must be examined. Analysis of the 64 possible 0.1% and 0.1° combinations shows that the extreme of radiation in the critical direction of 356 degrees true would increase from 11.7 mv/m to a value of 12.3 mv/m or 0.1 mv/m greater than the MEOV of 12.2 mv/m in that direction.

26. The engineer for Cosmopolitan would prefer a final adjustment value of radiation that would be about 10% below the specified MEOV. In all instances such values would be greater than the calculated fields except on the critical bearing of 356 degrees true where the calculated radiation is 11.7 mv/m, the MEOV is 12.2 mv/m, and the final adjustment value anticipated would be 11.0 mv/m. KWKH's engineer shows

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that adjustment of the radiation to 11 mv/m at 356 degrees true can be accomplished by a change in the design current ratio from 0.5445 to 0.55319 for the Number 1 or Northeast tower and from 0.4916 to 0.4903 for the number 3 or southwest tower. Again considering the most adverse combinations of the field and phase parameters, deviations in Towers 1 and 3 of plus 0.5% in magnitude and minus 0.3° in phase will produce a radiation value of 13.8 mv/m; 0.3% in magnitude and 0.2° in phase will produce a value of 12.7 mv/m; and 0.2% in magnitude and 0.2° in phase will produce a field magnitude of 12.1 mv/m. Thus only by holding the variations of the antenna parameters to no more than 0.2% in magnitude and 0.2° in phase will the radiation never exceed the MEOV.

27. There was disagreement between the consultant for Cosmopolitan and for KWKH as to the efficiency of the Nems-Clarke type 112 phase monitor which both Cosmopolitan and Huntley propose to use for the purpose of monitoring the current and phase relationships in their respective antenna systems. According to the manufacturer of this instrument, it has a phase resolution of 0.5° and 0.5% in current magnitude. Resolutions of the phase and field parameters on this order, however, are not sufficiently accurate to monitor properly the operation of either proposed antenna system within values below the MEOV. Even if the type 112 monitor were used in conjunction with a suitable digital voltmeter to increase resolution to 0.1° for phase and 0.1% for loop current, it is the opinion of the KWKH engineer that there would still be a question as to whether this would be adequate for surveillance of the small variations to which the antenna parameters must be held if radiation is not to exceed the MEOV. In his opinion good engineering practice would require an indicating instrument capable of a resolution approximately three times as great as the requirement for reading the instrument. Since the Type 112 monitor can be used only to read one loop current at a time, KWKH's engineer feels that the comparison of readings to determine current ratios is susceptible to additional error if there are any variations in power or carrier shift while reading the three tower currents. Current readings on this monitor are affected by the presence of modulation. For these reasons he is of the opinion that resolution and repeatability can be no greater than 0.2% for determining current ratios and that with this limitation the monitor used in conjunction with a digital voltmeter would still be inadequate to maintain Cosmopolitan's array within the 0.2% current limit.

Site Considerations in Cosmopolitan's Proposal

28. In this instance the proposed transmitter site is located about 2.6 miles north northwest of Edna. A two-lane highway bordered by wood pole utility lines on either side, runs to the east of the site. A wood pole utility line also cuts across the southern side of the site.

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It is in a sparsely settled area where the land is flat and used primarily for grazing. Low-level farm buildings are situated at the northeast and southwest corners but there are less than ten residences within a half mile radius. The consultant for Cosmopolitan who visited the site on June 10, 1966 observed that except for these residences and their associated farm sheds and the utility lines mentioned above, there are no structures within about a mile that might cause reflections or reradiation. The consultant for KWKH also visited the site and found that there were no terrain problems evidenced in the immediate vicinity except for the presence of vertical grounding wires on the nearby 25-foot utility poles which he felt must be electrically isolated if these elements are to be eliminated as a source of signal reradiation. He found, however, that there are a number of towers at distances greater than two miles from the site which in his opinion represent potential sources of significant reradiation. One of these is a 140 foot guyed tower located 2.3 miles south of the Cosmopolitan site and used in connection with a microwave system. KWKH's consultant is of the opinion that this has a theoretical potential reradiation of 11.4 mv/m. Immediately southwest of this tower is a 300 foot guyed tower with a potential reradiation of 10.1 mv/m. In the center of Edna at a distance of 3.6 miles southeast of the Cosmopolitan site is a 175 foot water tower which can reradiate as much as 11.3 mv/m. Two other guyed towers with heights of 166 and 430 feet located 4.1 and 4.9 miles, respectively, to the south of the site, have potential radiation values of 6.6 mv/m and 5.6 mv/m. It was his opinion that all of these elements could pose a serious problem in connection with the ability of the applicant to adjust the antenna radiation pattern to its specified values. In calculating the values of reradiation the engineer for KWKH assumed minimum loss conditions; consequently, these figures represent maximum possible reradiation under optimum conditions. This engineer conceded that reradiation would more than likely be less than depicted and that with the application of proper techniques a competent engineer could detune the structures to eliminate reradiation.

29. In connection with proving the performance of the proposed directional antenna, Cosmopolitan's engineer would make field strength measurements along radials in the directions approximately 349, 358, 6, 26, 45, 56 and 66 degrees true.^{3/} In addition it is proposed to meet all other requirements that may be specified in the construction permit. Cosmopolitan's engineer feels the adjustment and maintenance of the array will be facilitated by the relatively flat, open terrain. Most of the measuring locations will be considerably removed from the nearest wires

3/ It has been the practice of this engineer for some 20 years to run radials in the nulls and on the ends of the small lobes throughout the arc of suppression.

and buildings. There are tree clumps, irrigation ditches, farm lanes, and fences shown on recent large scale topographic maps which will permit accurate orientation in the field and provide for excellent repeatability of measurement at the different measurement locations including monitoring points. Two or more monitoring points will be selected in the manner required by the rules on each of the specified radials. Care will be exercised in selecting monitoring points which will permit a determination of whether changes in signal level arise from changes in ground conductivity between transmitter and monitoring point or due to antenna system instability.^{4/}

Huntley's Directional Antenna and Protection to Station KWKH

30. Huntley's proposed directional antenna system will consist of three base insulated vertical guyed radiators of uniform cross-section arranged on a line bearing 30 degrees true. Towers will be spaced 218 feet (90 degrees electrical) and each will have a height above base insulator of 220 feet (91 degrees electrical). The base of each of the towers will be varied to achieve an elevation of 311 feet for each tower. The ground system at the base of each tower will consist of 120 copper wire radials 220 feet long (approximately one quarter wavelength) buried 6 to 8 inches and interspersed with 120 copper wire radials 50 feet long buried closer to the surface. Where the long copper wire radials intersect between towers, they will be terminated and bonded to a transverse copper strap. Since the site property cannot accommodate the entire ground system, the long ground wires will be shortened in a northwesterly direction about the northeast tower where approximately one-fourth of the radials would be affected and in a southeasterly and southwesterly direction about the southwest tower where some one-half of the radials would be affected. The curtailment of the wire radials would vary from a small amount to about 40 feet at the maximum. Because of the considerable ground system proposed the shortening of some of the radials wires as described is not expected to have any effect on the stability or efficiency of the proposed directional antenna system. Additional land, if required, is available from the lessor.

31. The proposed antenna pattern will be cardioid in shape, and will be adjusted as close as possible to the computed radiation values. Phase sampling lines and coaxial transmission lines feeding the tower will be of equal length to equalize variations due to changes in temperature. Power for tower lighting will be supplied across the tower base

^{4/} In the event of a grant, Cosmopolitan will furnish KWKH a copy of the antenna proof of performance at the time application is filed for station license.

insulators by use of Austin transformers. The design of antenna units will be symmetrical so as to minimize temperature effects between the units. Phasors will be built by a commercial firm according to this engineer's specification and will include the use of vacuum capacitors where required. Tuning houses will be of non-metallic design and located a sufficient distance from the tower bases to avoid adverse effects in wet weather. Wood fences around the towers will be located at a greater than usual distance from the tower base so as to avoid any effect on the operation of the antenna system. Power for the station will be brought into the transmitter building in underground conduit.

32. It has been the practice of the firm represented by Huntley's engineer to specify for use in directional antenna systems radio frequency ammeters of the expanded-scale type. Before being placed in service, these meters are calibrated over the entire scale by comparison with special expanded-scale mirror meters that have an accuracy checked to 0.25% and a scale length in excess of five inches. Experience of the consulting firm has shown that use of the calibrated expanded-scale radio frequency ammeter has permitted maintenance of antenna and common point currents within very close limits. Calibration charts will be provided for the radio frequency ammeters that will be utilized in the proposed array.

33. It is proposed to install a modified "Ohms Law" phasor and to provide vernier phase and current ratio adjustment controls as well as vernier impedance control. Huntley's engineer has found that when a modified Ohms Law phasor is employed, common point impedance does not change even when phase or current ratio adjustments are of a magnitude sufficient to cause gross changes in the antenna radiation pattern. Normally, no adjustment of impedance would be required for minor changes in phase or current ratio. However, if any adjustment of the common point impedance should be required, the vernier impedance controls would permit such adjustment.

34. The antenna current ratios and phase parameters specified for Huntley's directional antenna system follow:

<u>Tower</u>	<u>Current Ratios</u>	<u>Phase</u>
Northeast	1.000	+102°
Center	1.989	+ 0.92°
Southwest	1.000	-102°

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35. Although the Huntley design is deeply suppressed toward the northeast over an arc from 340° to 31° true, the critical angle of protection towards KWKH is 17° from azimuths 355° to 12° true. In the broader arc there is a small lobe on the line of towers at 30° and there are broad minima 30 degrees on either side of the lobe. Assuming a loss of 2 ohms per tower, it is anticipated that the array will develop an RMS of 620 mv/m for a power of 10 kilowatts or 196 mv/m for 1 kilowatt. The operating base resistances for the several antenna elements are 16 ohms for the northeast tower, 36 ohms for the center tower and 57.9 ohms for the southwest tower.

36. The following values of radiation are specified in the horizontal ground plane over the arc of suppression toward KWKH:

<u>Azimuth</u>	<u>Calculated Field</u>	<u>MEOV</u>
340°	30.0 mv/m	34.5 mv/m
350	8.35	13.4
0	8.75	13.2
10	8.30	12.8
20	10.25	14.7
30	11.85	16.3
40	10.25	14.7
50	8.30	12.8
60	8.75	13.2
70	8.35	13.4
80	30.0	34.5

Huntley's engineer contends that he can and will adjust the radiation from the proposed directional antenna to conform with the above-specified calculated fields.

37. Assuming the directional antenna radiation pattern is adjusted to conform with the calculated field values, the center tower of the antenna system may be varied plus or minus 0.5% in current ratio and plus or minus 0.4° in phase before radiation would equal the MEOV in several directions and not exceed the MEOV in other directions. If similar variations were made adversely in the two end towers with respect to the center tower, the resultant radiations would not exceed the MEOV. The antenna phase parameters are proposed to be maintained within 0.1° .

38. Separate studies made by KWKH's engineer are in substantial agreement with the above calculations made by Huntley's engineer. The former also considered the effects of variations of the field and phase

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in the two end towers under the most adverse conditions for the critical azimuth bearing of 2 degrees true. The MEOV in this direction is 13.2 mv/m and for no variation in parameters the calculated field is 8.7 mv/m. For a change in current magnitude of 1% and phase of 0.6°, the resultant field would reach 15.8 mv/m or 2.6 mv/m in excess of the MEOV; for a change of 0.7% and 0.4° in current magnitude and phase, respectively, the resultant field would reach a value of 13.4 mv/m or 0.2 mv/m greater than the MEOV. In the event variations were limited to 0.5% in current magnitude and 0.3° in phase, the resultant field at 2 degrees true would attain a magnitude of 12.2 mv/m or 1 mv/m below the MEOV of 13.2 mv/m specified for this direction.

39. Huntley's consultant proposes to use a Nems-Clarke Type 112 Phase Monitor for monitoring the field and phase parameters of the system. As noted in connection with the Cosmopolitan proposal, this instrument has a manufacturer's stated resolution of 0.5% in current magnitude and 0.5° in phase. Huntley, however, proposes to add a suitable digital voltmeter so that resolution can be sharpened to 0.1% in current and 0.1° in phase. Accuracies of this order would be adequate to facilitate maintenance of radiation to values below the MEOV. The engineer for KWKH feels that the Type 112 Monitor used in conjunction with a suitable digital voltmeter would help in maintaining the array within 0.3° in phase. He asserts, however, that his experience with the Type 112 shows current ratios cannot be obtained with accuracy in the presence of modulation. As a result it is his opinion that resolution and repeatability can be no greater than 0.2% for determining current ratios. To this contention the Broadcast Bureau in its Proposed Findings states:

"It would appear that if the loop current readings were made during the intervals when there is no modulation present, then the current ratios could be determined with a resolution of 0.1% and using the 'three times' standard applied by KWKH's engineer, the unit could be used to maintain the array current ratios within 0.3%. . . . There is no reason to believe that current ratios cannot be read directly simply by setting the meter to read unity for the reference tower."

Huntley Site Considerations

40. The proposed site was visited by the engineering consultants for both Huntley and KWKH. Each described the terrain as "rolling" or

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"gently rolling" in the area where the site is located and Huntley's engineer found no terrain feature which would be likely to distort the radiation pattern. The KWKH consultant on the other hand, said he would expect some distortion, but of greater significance than terrain, in his opinion, is the presence of certain structures in the area which would have an adverse effect on the applicant's ability to adjust and maintain the array.

41. Approximately 1 mile southwest of the site in the direction of Yoakum there is a rodeo arena with floodlights which are situated on wooden poles. The KWKH engineer estimated the height of these poles as 75 feet above the ground and estimated that they would result in reradiation in excess of the 4.5 mv/m tolerance between the Huntley computed pattern and the proposed MECV. Huntley's engineer from personal inspection estimated the height of these poles at 40 feet and therefore expected lower reradiation from the down guys. In any event, if there were to be reradiation sufficient to distort the pattern, it would be relatively easy, electrically, to isolate each of the down guys by the installation of chokes. The KWKH engineer agreed that reradiation from these elements could be rendered insignificant by proper detuning procedures.

42. A large object which could become a parasitic radiator is the Yoakum water tower located about 2.16 miles southwest of the site. Its height is approximately 200 feet and it has a potential reradiation value of 24.6 mv/m according to the KWKH consultant. Nevertheless, on the basis of certain additional assumptions including a 5 ohm ground loss, the value was reduced to 13.8 mv/m. This is greater than the radiation value specified in the pattern's minima. The KWKH engineer was of the opinion that reradiation from the tower would be asymmetrical about the Huntley line of towers and would distort the directional pattern in a manner which could not be compensated by an adjustment of the array. The tower consists of a reservoir tank supported by 6 steel legs connected together with horizontal braces. A cylindrical pipe drops from the tank to the ground. Huntley's engineer was of the opinion that no serious problem would be encountered due to the presence of this tower, and, if trouble occurs he has been authorized by Huntley to detune or otherwise isolate this tower and any other obstruction which may cause reradiation difficulties in adjusting the antenna system. While the engineer for KWKH conceded that the water tower can be detuned, he said that in his experience no two situations of this sort have been alike and that the method of detuning would require experimentation.

43. Another object approximately 1.7 miles southwest of the site is a 150 foot guyed 2-way radio tower. The KWKH engineer calculated that

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this has a potential reradiation value of 32 mv/m, but as a practical matter he would expect lower values of reradiation. In the opinion of Huntley's engineer there is no accurate way to calculate actual reradiation because there is a question about the quality of the electrical bonding between sections of the structure. Also the tower is supported by uninsulated guy wires. Consequently, he finds that the tower would not present any significant problem in the adjustment and maintenance of the array. But if it did, he stated that conventional choking elements could be suspended from the tower and thus isolate it and avoid serious reradiation.

44. In establishing the performance of the directional antenna system it is planned to make specific radial measurements in the directions 353, 3, 13, and 30 degrees true in addition to such others as may be subsequently specified in the instrument of authorization. Daily measurements of the field strength at the selected monitoring points will be made for a period sufficiently long to show that the array is essentially stable and that the field strengths at the monitoring points do not vary beyond the values specified in the construction permit. Huntley's engineer feels that on the basis of his many years of experience in the design, construction, and adjustment of directional antenna systems, the proposed directional antenna with construction features designed to enhance stability and facilitate adjustment should not present any unusual or unreasonable problems in the maintenance of radiation pattern fields that will not exceed the MEOV and thus afford adequate protection to WKHK.

Other Directional Antenna Systems

45. The consultants who testified stated that it is virtually impossible to find any 2 directional antennas which are exactly alike, since they are all custom designed. Nevertheless, the record contains evidence regarding several directional antenna systems which have achieved suppression of radiation values comparable to those proposed by Cosmopolitan and Huntley. WGBS in Miami, Florida, operating on 710 kc with a power of 10 kilowatts, formerly used a 4-element in-line array and obtained minimum adjustment values of radiation equivalent to 3.85 mv/m for Cosmopolitan and 4.15 mv/m for Huntley. The present antenna used by WGBS was designed by the WKHK engineer and consists of a 6-element parallelogram array at a new site. It has a minimum radiation value equivalent to 5.93 mv/m for Cosmopolitan and 6.23 mv/m for Huntley.

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46. KCNC at Amarillo, Texas operating with a power of 10 kilowatts on 710 Kc/s and employing a 5-element array suppresses radiation to an equivalent of 5.4 - 7.2 mv/m for Cosmopolitan and 5.97 - 7.95 mv/m for Huntley. A similar restriction on radiation was obtained by WDIA at Memphis, Tennessee, a station operating on 1070 Kc/s with a power of 5 kilowatts and a 6-element array: the equivalent of 7 mv/m for Cosmopolitan and 7.85 mv/m for Huntley. Somewhat larger adjustment values are obtained by KFRE in Fresno, California operating on 940 Kc/s with a power of 50 kilowatts and using a 4-element directional antenna: the equivalent of 7.57 mv/m for Cosmopolitan and 8.46 mv/m for Huntley.

47. All of the foregoing stations have directional antennas with more than three elements. In those instances where 3-element arrays are employed, none shows adjustment values of radiation as low as that proposed by either applicant herein except WKEW in Buffalo, New York. WKEW operates on 1520 Kc/s with a power of 50 kilowatts. In a 1941 proof-of performance adjustment WKEW obtained radiations equivalent to 5.9 mv/m for Cosmopolitan and 6.6 mv/m for Huntley. Subsequently in 1963, reevaluation of the WKEW operation established radiations equivalent to 11.6 mv/m for Cosmopolitan and 13 mv/m for Huntley. Of the many stations employing 3-element arrays listed by applicants, only the following, apart from WKEW, show equivalent adjustment values of measured radiation under 10 mv/m.

Station	Freq.	Power	Equivalent radiation	
			Cosmo.	Huntley
WBAL Baltimore, Md.	1090 Kc/s	50 Kw	8.35 mv/m	9.1 mv/m
KING Seattle, Wash.	1090	50	8.8	9.8
WTOP Washington, D. C.	1500	50	8.5	9.5
WWNH Rochester, N. H.	930	5	8.5	9.5
KHFI Austin, Texas	970	1	8.27	9.22
WICH Norwich, Conn.	1310	5	8.05	9.02
KOMA Oklahoma City, Okla.	1520	50	8.8	9.8

The site and vicinity where each of these stations is constructed were not described in the record or compared with either the Cosmopolitan or Huntley sites. Evidence does establish that in connection with the adjustment of the WBAL array (done for the most part by KWKH's engineer) it was found necessary to detune the grounding wire on a smoke stack, a tubular steel tower used for police communication, and grounding wires on some wood utility poles.

48. Based on his experience with WBAL, the engineer for KWKH believes that Cosmopolitan's array should not be any more difficult to adjust than that of the Baltimore station and his experience would indicate

that the proposed radiation pattern can be obtained if certain conditions are met. Specifically, both sites would have to be essentially comparable and he stressed the necessity of eliminating reradiation from surrounding structures. This assumes availability of competent, experienced personnel and a sufficiency of funds. KWKH's engineer further notes that Cosmopolitan's array employs wider tower spacing which tends to give more stability to the system. The Huntley array, although not designed with tower spacing as wide as that proposed by Cosmopolitan, nevertheless is not as restricted in the critical arc toward KWKH. Assuming that reradiation from elements in the site area can be eliminated, there should not be any greater difficulty attached to the adjustment of Huntley's array than that proposed by Cosmopolitan.

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Conclusions

1. In the last analysis this case hinges upon 2 questions. One is whether a decision can be made under Section 307(b) on the question of superior need for service and the other is whether either of the applicants can construct, adjust and maintain its proposed directional antenna system so as to provide adequate protection to Radio Station KWKH in Shreveport, Louisiana.

2. Inasmuch as neither Edna nor Yoakum possesses any local broadcast outlet, each has a presumption of need for its first transmission service. There being a standoff at this point it is necessary to ascertain whether either applicant should be preferred by virtue of providing a fairer, more efficient or more equitable distribution of radio service. There is no choice with respect to size of the communities since they are approximately the same. While the record indicates that the growth of population in Edna and also in Jackson County, where it is situated, is somewhat in excess of the growth in Yoakum and the 2 counties in which it is situated, there is little basis here for any preference. Both principal communities receive primary service from 8 existing stations. In each instance, the primary service area receives signals from a considerable number of stations. The minimum number of such signals in the Cosmopolitan service area is 12, and the minimum in the Huntley service area is 9. Within their respective 0.5 mv/m contours, Cosmopolitan would serve a population of approximately 335,000 persons and Huntley would serve approximately 357,000 persons. These differences are not sufficiently great to give either applicant a 307(b) preference.

3. Each applicant proposes to operate on 1130 kc with 10 kw power, daytime only, using a directional antenna. As indicated by the order of designation as well as by the evidence, both of these antenna systems would be extremely tight in order to afford protection to station KWKH. In view of the critical nature of this protection, it is necessary to determine whether each applicant has borne the burden of proof that its proposed antenna system can be adjusted and maintained as proposed.

4. The evidence on this subject as shown in the Findings of Fact is voluminous. But, in essence it comes down to the expert opinions of three consulting engineers. The consultant for each of the applicants was of the opinion that he could so adjust and maintain the proposed array and each stated that he will be employed to do so. The consultant for respondent KWKH, however, was of the opinion that neither array could be adjusted and maintained so as to afford complete protection to his station. All three consultants are men of extensive experience in the field of designing and adjusting directional arrays. The question, however, is not simply which consultant is to be relied upon. The burden of proof is on the applicants and unless it has been shown affirmatively that either or both of the proposed antenna systems will function without the hazard of interference, the burden has not been sustained.

5. At its closest approach to the WKH 0.1 mv/m contour the Cosmopolitan 0.005 mv/m contour would lie about 6 miles away. Under the Huntley proposal the comparable contours would be separated by not less than 3 miles. As shown in paragraph 25 of the Findings, the MEOV on certain critical azimuths would be exceeded in the Cosmopolitan proposed system by a variation in phase of plus or minus 1° in the center reference tower or in current of plus or minus 1%. If current and phase, respectively, of the two end towers were to vary by 1% or 1° with respect to the center tower, under the most adverse conditions radiation in the critical direction of 356 degrees true would exceed the specified MEOV of 12.2 mv/m by 6.5 mv/m.

6. Cosmopolitan proposes to hold its relative parameter variations to at least 0.5% in current and 0.5° in phase. Yet, an analysis of 64 possible combinations of 0.1% and 0.1° indicates that the extreme of radiation on 356 degrees true would exceed the MEOV on that azimuth by 0.1 mv/m. As shown in paragraph 26 of the Findings, in order to prevent radiation from ever exceeding the MEOV, variations of the antenna parameters must be held to no more than 0.2% in magnitude and 0.2° in phase.

7. In the case of Huntley's proposed antenna system, assuming that it is adjusted to the calculated field values, the center tower may be varied plus or minus 0.5% in current and plus or minus 0.4° in phase before radiation would acquire the MEOV in several directions and not exceed the MEOV in other directions. Nevertheless, on the critical azimuth of 2 degrees true a change in current magnitude of 1% and phase of 0.6° would produce radiation in excess of the MEOV by 2.6 mv/m (see paragraph 38 of Findings). Similarly, a variation of 0.7% and 0.4° in current and phase respectively would result in exceeding the MEOV by 0.2 mv/m.

8. In the vicinity of each proposed antenna site there are a number of towers or other man-made obstructions which represent potential sources of reradiation. These are discussed at length in the Findings and no detailed repetition is needed here. It is sufficient to state that there was a consensus among all the consultants who testified that these towers could be effectively detuned or otherwise isolated so as not to produce reradiation. It is somewhat ambiguous, however, on the basis of the record as to how these obstructions would be detuned or at what cost. It is fair to say, however, that under ideal conditions they could be eliminated as hazards to the effective performance of either the Cosmopolitan or Huntley proposals.

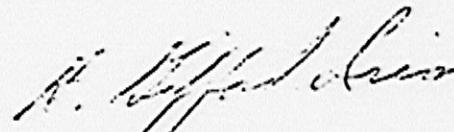
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9. A more critical question arises in connection with monitoring. Both Cosmopolitan and Huntley propose to use a Nems-Clarke Type 112 phase monitor which, according to its manufacturer, has a resolution of 0.5° in phase and 0.5% in current. Huntley also has proposed to add a digital volt meter so that this resolution can be sharpened to 0.1° in phase and 0.1% in current. According to the KWKH engineer, however, in neither instance would the monitoring equipment be adequate for surveillance of the small variations to which the antenna parameters must be held if the respective antenna systems are not to produce radiation in excess of the MEOV specified (see Paragraphs 27 and 39 of the Findings). It was his opinion -- and this was not disputed -- that good engineering practice requires an instrument capable of resolution approximately three times as great as the requirement for reading the instrument. Thus, resolution and repeatability in the case of either proposal can be no greater than 0.2% for determining current ratios. The evidence was not conclusive that the Type 112 Monitor, even when used with a suitable digital volt meter, would show current ratios with the necessary accuracy. On the basis of these factors and others set forth at length in the Findings it would appear that the question as to whether either proposed system will function with that degree of perfection required to protect KWKH from interference cannot be answered dogmatically one way or the other. In a situation where the suppression of radiation on certain bearings is as critical as shown here, it is not without significance that the applicant faces a serious risk. Assuming that he can construct and maintain his array in the manner hoped for, he is safe. But if he encounters adverse field conditions it is possible that an expensive investment may be largely lost because, in such circumstances, he may find it impossible to secure a license to cover his construction. Thus, it is not unreasonable to bear in mind the hazards to the applicants themselves.

10. Considering all of these factors the Hearing Examiner is forced to conclude that upon this record it is impossible to predict affirmatively the successful adjustment and maintenance of either proposed array. This is not to say that the opposite is true. In other words the Examiner cannot say positively that neither array is subject to adjustment and maintenance. But such a conclusion is not required because the burden lay with the applicants, not with KWKH. It is thus concluded that neither Cosmopolitan nor Huntley has met its burden of proof and both must therefore be denied.

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IT IS ORDERED, that unless an appeal to the Commission from this Initial Decision is taken by any of the parties, or the Commission reviews the Initial Decision on its own motion, the applications of Cosmopolitan Enterprises, Inc. (File No. EP-16347) and H. H. Huntley (File No. BP-16570) for construction permits are DENIED.



H. Gifford Irion
Hearing Examiner
Federal Communications Commission


Gifford Irion

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Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D. C. 20554

FCC 68R-519

In re Applications of)	
)	
COSMOPOLITAN ENTERPRISES, INC.)	DOCKET NO. 16572 ✓
Edna, Texas)	File No. BP-16347
H. H. HUNTLEY)	DOCKET NO. 16573
Yoakum, Texas)	File No. BP-16570
For Construction Permits)	

Appearances

Jerome S. Boros and Edward L. Smith on behalf of Cosmopolitan Enterprises, Inc.; William J. Potts, Jr. on behalf of H. H. Huntley; Harry J. Ockershausen on behalf of International Broadcasting Corporation; and Vergil W. Tacy on behalf of Chief, Broadcast Bureau, Federal Communications Commission.

DECISION

Adopted December 13, 1968 ; Released December 17, 1968

By the Review Board: Berkemeyer, Slone and Pincock.

1. This proceeding involves the two mutually-exclusive applications of Cosmopolitan Enterprises, Inc., (Cosmopolitan) and H. H. Huntley (Huntley) for construction permits to establish new standard broadcast stations at Edna, Texas, and Yoakum, Texas, respectively. Each proposes to operate on frequency 1130 kilohertz with 10 kilowatts power during daytime hours only and with a directional antenna system. Edna and Yoakum are located in southeastern Texas and are approximately 35 miles apart. The hearing issues relate to areas and populations and availability of other services, adjustment and maintenance of directional antenna systems and whether the proposals would provide adequate protection to Station KWKH, Shreveport, Louisiana, and a Section 307(b) determination.

2. In the Initial Decision (FCC 67D-41), released August 9, 1967, Hearing Examiner H. Gifford Irion recommended denial of both applications. The Examiner concluded that the differences in the need for the applicants' respective services were not sufficiently great to award a 307(b) preference to either and that the applicants

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failed to carry the burden of proof that the proposed directional antenna systems can be adjusted and maintained as proposed. The proceeding is now before the Review Board on exceptions filed by both applicants and the Broadcast Bureau. We have reviewed the Initial Decision in light of these exceptions, our examination of the record, and the oral arguments of the parties presented before a panel of the Review Board on September 5, 1968. In brief, we conclude that both applicants' directional antenna systems can be adjusted and maintained so as not to cause interference to the operation of Station KWKH, which is the basis for our reaching a different result from the Examiner on this point, and that the proposal of Cosmopolitan would better achieve the objectives of Section 307(b) of the Communications Act, as amended. Except as modified and supplemented herein and in the rulings on exceptions contained in the attached appendix, the Examiner's findings of facts are adopted.

Directional Antenna Systems and Protection of Station KWKH

3. KWKH, as a Class I-B station, is entitled to protection from objectionable interference to its 0.1 mv/m contour from stations operating on the same channel. Although it is not disputed that applicants' 0.005 mv/m contours do not overlap KWKH's protected contour, minor variations in the operating parameters could result in radiation exceeding the maximum expected operating values (MEOV's) proposed by each station. Although Huntley could exceed its MEOV's only slightly before causing interference to KWKH, Cosmopolitan, in the critical direction of 356°, could increase radiation from its MEOV of 12.2 mv/m to 20 mv/m before causing interference to KWKH. Therefore, it is incumbent on the applicants to demonstrate that their directional antenna systems can be adjusted and maintained to provide adequate protection to Station KWKH. The directional antenna systems will consist of three element in-line arrays. Cosmopolitan's towers will be spaced 150 electrical degrees apart, and Huntley's towers will be spaced 90 electrical degrees apart. The towers of both applicants will be oriented in the north northeast to south southwest direction. Excitation of Cosmopolitan's antenna system according to its proposed current ratios and phase parameters would produce a radiation pattern which will be a symmetrical figure eight that is not entirely closed at the center and with the main radiation lobes broadside to the line of towers. Huntley's radiation pattern will be cardioid with radiation deeply suppressed in the north northeasterly direction. In directions toward the KWKH service area, both Cosmopolitan and Huntley have specified maximum expected operating values (MECV's) within which they propose to limit the variation of signals from the theoretical design values.

4. The record establishes that, if Cosmopolitan's operation were to be contained within its proposed maximum expected operating values (MEOV's), the KWKH service area would be protected. If there were variations in phase of plus or minus one degree or in current magnitude of plus or minus one percent from the design values in the center tower of the directional array, the radiated fields on the eight bearings between 351° and 26° true would exceed the MEOV's specified by the applicant. On the critical bearing toward KWKH of 356° true, the radiated field would reach 16.4 mv/m, which exceeds the MEOV of 12.2 mv/m. On this same bearing, if variations in phase and current magnitude of one degree and one percent were to occur in the end towers, the radiated field would be 18.7 mv/m under the most adverse conditions. If on the other hand, the variations were limited to one-tenth of a degree and one-tenth of one percent, the extreme of radiation would be 12.3 mv/m. Although the radiated field on the 356° radial under these operating conditions would exceed the MEOV's, the field would not reach the maximum allowable value of 20 mv/m. After construction of the station, Cosmopolitan's engineer intends to adjust the array so that the radiated values would be about ten percent below the specified MEOV's. Under such circumstances, the radiated values would be greater than the theoretical values in all instances, except for the critical radial of 356° true where it would be 0.7 mv/m below the calculated radiation of 11.7 mv/m. With this final adjustment, the operation of Cosmopolitan's directional antenna could be maintained within the specified MEOV's if the variations in the antenna parameters do not exceed more than two-tenths of one percent in current magnitude and two-tenths of a degree in phase.

5. As to Huntley's proposal, an operation within its proposed MEOV's would also provide protection to the service area of Station KWKH. If the antenna parameters of the center tower, or of the two end towers, were to vary not in excess of one-half of one percent in current and four-tenths of a degree in phase from the design values, the resultant radiated fields would not exceed the MEOV's. On the critical bearing toward KWKH of 2° true, variations of plus one-half of one percent in current magnitude and minus three-tenths of a degree in phase in the end towers would result in a radiated field of 12.2 mv/m which is 1 mv/m below the MEOV of 13.2 mv/m.

6. Other factors which could affect the directional antenna radiation patterns are terrain and objects located in the proximity of the transmitter sites. The Cosmopolitan site is located on flat grazing land where there appear to be no terrain problems in the immediate vicinity except for the grounding wires on nearby utility poles. There are also a number of towers at distances greater than 2 miles from the

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site which are potential sources of reradiation. As to Huntley, the proposed transmitter site is on a rolling terrain. There is a difference of opinion between Huntley's and KWKH's engineers as to the effect of rolling terrain. Huntley's engineer believes that such a terrain would not be likely to affect the directional antenna radiation pattern, but KWKH's engineer expects some distortion to occur. Similarly, there are a water tower and other towers with guywires located at varying distances from Huntley's site, which are potential sources for reradiation of signal. However, the engineering consultants agreed that, with proper detuning procedures which the applicants have obligated themselves to undertake if needed, the reradiation problem can be reduced to a minimum.

7. For surveillance of their directional antenna systems, Cosmopolitan and Huntley both propose to use a Nems-Clarke Type 112 phase monitor, for which the manufacturer claims a resolution capability of one-half of a degree in phase and one-half of one percent in current magnitude. Huntley proposed to add a digital voltmeter which will increase the resolution capability of the monitor to one-tenth of a degree in phase and one-tenth of one percent in current magnitude. Assuming, on a conservative basis, that the resolution capability of indicating instrument should be approximately three times as great as the requirement for reading the instrument, Huntley's phase monitor-digital voltmeter combination would meet this requirement, but Cosmopolitan's monitoring system would not. Even if Cosmopolitan were to use a phase monitor-digital voltmeter combination, it would not provide adequate resolution for Cosmopolitan to maintain its radiation within the specified MEOV's. However, as previously indicated in paragraph 4 above, radiation values higher than Cosmopolitan's proposed MEOV's will not necessarily result in interference to KWKH. Because of the wide range between the maximum expected operating values (MEOV's) and the value at which interference would be cause to KWKH, Cosmopolitan can radiate 20 mv/m on the 356° radial without causing interference to KWKH. While we agree with the Examiner that Cosmopolitan has not shown with absolute certainty that it will not exceed the foregoing upper limit, we also agree with the Broadcast Bureau that the possibility that it will exceed such limit is remote. The fact that Cosmopolitan has such a large leeway before radiation in excess of its MEOV's would cause interference to KWKH presents a unique situation which, viewed in light of the Bureau's comments and the existence of monitoring equipment having the necessary accuracy, persuades us that Cosmopolitan's inability to show that it can maintain the operation within its MEOV's should not, in the circumstances of this case, be held disqualifying. We believe that the public interest would best be served in this connection by providing that any grant to Cosmopolitan be conditioned on

the applicant's installing a monitoring system that would adequately monitor the adjustment of its directional array to demonstrate that the array is maintained during day to day operation within the values specified in the authorization which will provide adequate protection to KWKH.

Section 307(b) Consideration

8. Although most of the pertinent factual information is set forth in the Initial Decision, a brief summary of the facts would assist in understanding our disposition of the 307(b) issue. Edna, Texas, which Cosmopolitan proposes to serve, has a population of 5,038 persons (1960 Census) and is the largest city and the seat of Jackson County (pop. 14,040 persons). The headquarters of the Jackson County Chamber of Commerce is located in Edna. The Jackson County Courthouse contains all of the county officers and the county library. There are also located in Edna offices of four state agencies 1/ and seven agencies of the federal government. 2/ Edna, under home rule, is governed by a mayor and city council and provides the usual municipal services such as police, fire, utilities, schools and recreation. Based on the city's water department records, Edna's population in 1966 was approximately 6,000 persons, and the city recently annexed an area with 81 homes which increased the Edna population by about 255 persons. The United States Census reports reflect a steady growth in population for both Edna and Jackson County. Edna's population in 1950 was 3,855 persons. The Jackson County population increased from 12,916 persons in 1950 to 14,040 persons in 1960.

9. Edna's major industries consist of two meat processing plants, one of which is located beyond the city limits, and a welding company. The estimated labor force is 4,440 persons, some of whom are employed in industries located in other communities. The major products of Jackson County are rice, beef, cotton, tomatoes, corn and oil. Edna has one weekly newspaper, but neither Edna nor Jackson County has an AM, FM, or TV station.

10. Yoakum, which Huntley proposes to serve, has a population of 5,761 persons (1960 Census) and is not a county seat. It is governed

1/ Highway Department, Welfare Office, Unemployment Compensation Office, and Department of Public Safety.

2/ Federal Land Bank, Civil Defense, Farmer Home Administration, Agricultural Stabilization, Conservation, Social Security Administration, and County Agent of the Department of Agriculture.

under a home rule charter. Yoakum is located on the boundary of De Witt and Lavaca Counties (pop. 20,683 and 20,174 persons, respectively). Approximately 70% of the city is in Lavaca County and the remaining 30% is in De Witt County. Cuero, located 16 miles southwest of Yoakum, is the seat of De Witt County, and Hallettsville is the seat of Lavaca County. Yoakum's population in 1950 was 5,231 persons. The De Witt County population decreased from 22,973 persons in 1950 to 20,683 persons in 1960, and the Lavaca County population decreased from 22,159 persons in 1950 to 20,174 persons in 1960.

11. Yoakum is located in an agricultural area where grain and cotton are the principal products and stock raising and large cattle feedlots are beginning to develop. There are nine manufacturing companies in Yoakum, of which four are engaged in tanning of leather and manufacturing of leather products and employ about 900 persons. There are also 123 retail establishments, 17 wholesale trade establishments and food processing plants employing approximately 510 persons. Yoakum has a labor force of about 3,160 persons. It has its own schools, a municipal hospital, churches of various denominations and offices of four state agencies. 3/ Yoakum also provides water, sewer and electrical facilities to its residents. The Chamber of Commerce and its associated organizations assist Yoakum's industry and encourage new industry in Yoakum. There is one newspaper published three times a week in Yoakum. There is no AM, FM or TV station in Yoakum or in Lavaca County, and the only such station in De Witt County is AM Station KCFH in Cuero.

12. Within its proposed 0.5 mv/m contour, Cosmopolitan would provide service to 334,702 persons residing in an area of 18,100 square miles. There are a minimum of 12 to a maximum of 29 of other services available within this area. Edna now receives service from eight existing stations. Within Cosmopolitan's proposed 2 mv/m contour, there are ten communities with population of 2,5000 or greater. Of these, Hallettsville, Palacios and Port Lavaca now receive services from at least five stations, and Cuero, Victoria and Yorktown receive services from at least nine stations. The remaining communities, including Yoakum, receive between six to eight services.

13. Huntley would provide service to 357,010 persons residing in an area of 20,914 square miles within its proposed 0.5 mv/m contour. There are a minimum of nine to a maximum of 24 other services available

3/ District Office of Texas Highway Department, State Health Department, State Employment Agency, and Soil Conservation Service.

within this contour. Yoakum now receives services from eight existing stations. There are 11 communities within Huntley's 2 mw/m contour which receive a minimum of five to a maximum of nine primary services. Among these communities are Victoria, Cuero, Edna and Port Lavaca. Although Huntley would serve Cuero, the seat of De Witt County, it would not serve Halletsville, the seat of Lavaca County.

14. The Review Board agrees with the Hearing Examiner and the Broadcast Bureau that the foregoing facts raise a close and difficult 307(b) question. However, in our view, there are sufficient differences between the two proposals to permit a meaningful 307(b) choice, so that it is unnecessary to reopen the record and conduct further hearings to evaluate the comparative qualifications of the applicants. Although the communities applied for are approximately the same size, it is significant that Edna is the county seat of a county without any broadcast stations. Yoakum is not a county seat and one of the two counties in which it is located has a broadcast outlet. The Board has held, on several occasions, that the importance of communities to their surrounding areas may be of substantial and decisive significance. See, e.g., Radio Haddonfield, Inc., 37 FCC 168, 3 RR 2d 25 (1964). ^{4/} We have also held that the relative significance of a community includes its commercial, governmental and cultural attributes. Five Cities Broadcasting Co., Inc., 35 FCC 501, 504, 1 RR 2d 279, 283 (1963). While we do not find an adequate basis for concluding that either of the communities here is economically or culturally more significant in the area to be served, it is clear that the political and governmental importance of Edna surpasses that of Yoakum. This preference takes on added weight when considered in light of the growth patterns of the relevant areas. Edna is growing at a faster pace than Yoakum (during the period between 1950-1960, there was an increase of approximately 30 percent in the population of Edna and about 10 percent in the population of Yoakum), and Jackson County has shown a 10 percent growth in population over the past 10 years, whereas the population of De Witt and Lavaca Counties decreased by about nine percent during the same period. Although it is service to existing population with which the Commission must be primarily concerned, these statistics cannot be disregarded since they tend to substantiate our appraisal of the relative importance of the two communities in the areas they will serve. Cf. Holmes Broadcasting, Inc., 10 FCC 2d 781, 11 RR 2d 930 (1967). Based on the foregoing, we conclude that Edna, Texas, a growing community and seat of a county that is also growing, has a greater need than Yoakum, Texas, for a standard broadcast station.

^{4/} Cf. Big Basin Radio et al., 12 FCC 2d 182, 12 RR 2d 990 (1968).

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15. ACCORDINGLY, IT IS ORDERED, That the application of H. H. Huntley, Yoakum, Texas, (BP-16570) IS DENIED, and that the application of Cosmopolitan Enterprises, Inc. (BP-16347) for authority to construct a new standard broadcast station to operate on the frequency 1130 kHz, 10 kw DA, daytime only, at Edna, Texas, IS GRANTED, subject to the following conditions:

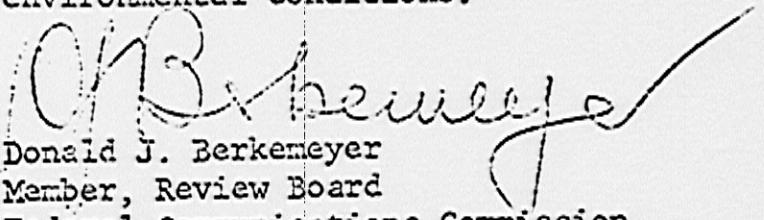
(a) The inverse distance fields on the indicated azimuths shall not exceed the following values:

346° - 17.0 mv/m	26° - 20.7 mv/m
356° - 16.4 mv/m	36° - 17.5 mv/m
6° - 12.5 mv/m	46° - 15.0 mv/m
16° - 15.7 mv/m	56° - 20.5 mv/m
	66° - 19.0 mv/m

(b) That a study, based upon actual variations in phase and magnitude of current in the individual antenna towers after adjustment, must be submitted with the application for license to indicate clearly that the inverse distance field strength at one mile can be maintained within the maximum expected operating values of radiation or the inverse distance fields indicated in the authorization. Allowable deviations in phase or current determined from this study will be incorporated in the instrument of authorization.

(c) That to insure maintenance of the radiated fields within the required tolerance, a properly designed phase monitor shall be installed in the transmitter room, and shall be continuously available as a means of correctly indicating the relative phase and magnitude of the currents in the several elements of the directional antenna system. The accuracy, resolution and repeatability of the monitor to be installed shall be adequate to demonstrate that the array is maintained during day to day operation within the maximum expected operating values of radiation or the inverse distance fields indicated in the authorization.

- (d) Field measuring equipment shall be available at all times, and, after commencement of operation, the field intensity at each of the measuring points shall be measured at least once every seven days and an appropriate record kept of all measurements so made.
- (e) A complete nondirectional proof of performance, in addition to the required proof on the directional antenna system, shall be submitted before program tests are authorized. The non-directional and directional field intensity measurements must be made under similar environmental conditions.


Donald J. Berkemeyer
Member, Review Board
Federal Communications Commission

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APPENDIXRulings on Exceptions of Cosmopolitan to the Initial Decision

<u>Exception Nos.</u>	<u>Rulings</u>
1, 2, 3, 4, 6	<u>Granted</u> in substance, see paragraphs 8 and 9 of this Decision. Otherwise <u>denied</u> as not of decisional significance.
5, 9	<u>Denied</u> as not being of decisional significance.
7	<u>Granted</u> . See paragraph 10 of this Decision.
8	<u>Granted</u> to the extent indicated in paragraphs 10 and 11 of this Decision. <u>Denied</u> in all other respects as of no decisional significance.
10, 11, 12	<u>Granted</u> in substance, see paragraph 10 of this Decision.
13	<u>Denied</u> . The findings in paragraph 9 of the Initial Decision adequately reflect the evidence concerning plans to locate a dam near Yoakum.
14, 16, 17, 18	<u>Denied</u> . The exceptions (1) fail to point out with particularity alleged errors in the Initial Decision (Section 1.277(a) of the Rules);(2) request many findings which already appear in the Initial Decision, and (3) the findings in paragraphs 45, 46, 47 and 48 of the Initial Decision adequately reflect the pertinent evidence of record.
15	<u>Denied</u> . Adequate findings based on the pertinent evidence concerning the Cosmopolitan and Huntley directional arrays appear at paragraphs 18-27 and 30-39 of the Initial Decision.
19	<u>Denied</u> . The exception contains no reference to the transcript page or exhibit on which it is based. An adequate finding appears at paragraph 22 of the Initial Decision.
20	<u>Granted</u> in substance, see paragraph 14 of this Decision.
21, 22, 23	<u>Granted</u> in substance, see paragraph 7 of this Decision.
24	<u>Granted</u> see paragraph 15 of this Decision.

16572-33

Exception Nos.Rulings

25

Denied. Cosmopolitan has not shown that the Examiner's action was arbitrary or capricious, or an abuse of his discretion.

Rulings on Exceptions of Huntley to the Initial DecisionExceptions to Findings
Nos.Rulings

1

Granted in substance, see paragraph 9 of this Decision.

2

Granted in substance, see paragraph 11 of this Decision.

3

Granted in substance, see paragraph 9 of this Decision.

4

Denied. Not of decisional significance.

5

Denied. The finding in paragraphs 38 and 39 of the Initial Decision as modified by paragraph 7 of this Decision adequately reflect the evidence of record.

Exceptions to Conclusions
Nos.Rulings

1, 2

Granted to the extent that appropriate conclusions are drawn in paragraph 14 of this Decision.

3

Denied as unsupported by the record.

4, 5, 10

Denied for the reasons stated in the Board's conclusions in this Decision.

6, 7, 8, 9

Granted in substance, see paragraphs 6 and 7 of this Decision.

Rulings on Exceptions of Broadcast Bureau to the Initial Decision

<u>Exception Nos.</u>	<u>Rulings</u>
1	<u>Granted</u> , see paragraph 11 of this Decision.
2, 3, 4, 8	<u>Denied</u> as not being of decisional significance.
5	<u>Granted</u> to the extent that Initial Decision is amended to show that maximum number of services available within the Huntley 0.5 mv/m contour is "24". The following is added to the listing in paragraph 14 of Initial Decision: 3 stations - 100%.
6	<u>Granted</u> . The phase "within values below the MEOV" on line 9, paragraph 27 of the Initial Decision is amended to read "within the required tolerances."
7	<u>Granted</u> . The following sentence is added to paragraph 35 of the Initial Decision: The maximum radiation in the major lobe is 1020 mv/m.
9	<u>Denied</u> . See ruling on Cosmopolitan Exception No. 15.
10, 11, 12	<u>Denied</u> . The findings in paragraphs 46, 47, and 48 of the Initial Decision adequately reflect the pertinent evidence of the record.
13	<u>Denied</u> . See ruling on Cosmopolitan Exception No. 19.
14	<u>Denied</u> . This exception, which is 14 paragraphs in length, does not meet the requirements of Section 1.277(a) of the Rules that each exception should be concise and will not be accepted if it contains argumentative matters or discussions of law.

16572-35

ORIGINAL

LAW OFFICES

HALEY, BADER & POTTS

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FILE

AREA CODE 202
DISTRICT 7-2724CABLE ADDRESS
HALRADIO

DREW G. HALEY (1904-1936)
 MICHAEL H. BADER
 WILLIAM J. POTTS, JR.
 W. P. SIEGEL
 HENRY A. SOLOMON
 KENNETH W. GROSS

FIFTH FLOOR, BROADCASTING-TELECASTING BUILDING

1735 DE SALES STREET, N. W.

WASHINGTON, D. C. 20036

JAN 16 1969

OFFICE OF SECRETARY

January 16, 1969

#16572

Mr. Ben F. Waple
 Secretary
 Federal Communications Commission
 Washington, D. C. 20554

Dear Mr. Waple:

* Transmitted herewith on behalf of H. H. Huntley, are the original and 19 copies of Application for Review in the hearing proceeding in Docket No. 16572 et al.

If there are any questions concerning this matter, kindly communicate directly with this office.

Very truly yours,

William J. Potts, Jr.

* Enclosure

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Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D. C. 20554

JAN 16 1969

OFFICE OF THE SECRETARY

JAN 17 1969

In re Applications of)
)
 COSMOPOLITAN ENTERPRISES, INC.) DOCKET NO. 16572 ✓
 Edna, Texas) File No. BP-16347
)
 H. H. HUNTLEY) DOCKET No. 16573
 Yoakum, Texas) File No. BP-16570
)
 For Construction Permits)

To: The Commission en banc

230-2
List C
BPK
encl + 19
1-16-69

APPLICATION FOR REVIEW

H. H. Huntley, by his attorneys, respectfully applies for review
of the Decision of the Review Board in the above-captioned matter
released December 17, 1968 (FCC 68R-519). This Application is filed
pursuant to Section 1.115 of the Commission's Rules and Regulations.

I. Questions Presented

The questions presented for review in this application are the
following:

- a. Having found adversely as to the ability of Cosmopolitan Enterprises, Inc., to adjust and maintain its directional antenna array as proposed, did the Review Board err by failing to disqualify that applicant as a consequence?
- b. Did the Review Board err by amending Cosmopolitan's MEOV proposal on its own motion, without notice or right to voice objection?
- c. Did the Review Board err under the Section 307(b) issue by assigning excessive evidentiary weight to the status of Edna, Texas, as a county seat?

-2-

d. Did the Review Board err in concluding that a grant of the Cosmopolitan Enterprises, Inc., application and a denial of the H. H. Huntley application would provide a fair, efficient and equitable distribution of broadcast facilities among the several states and communities?

II. Factors Which Warrant Commission Consideration of This Application For Review

A. The Question Presented Herein Relative to the Technical Qualifications of Cosmopolitan Enterprises, Is One of First Impression Before the Commission

1. With regard to the issues affecting the technical qualifications of both applicants, H. H. Huntley has no dispute with the findings of fact set forth in the Decision. The principal defect in the Decision, and the reason why that Decision must be reviewed by the Commission is that the ultimate conclusion reached by the Review Board is contrary to the evidence, and disregards the significance of the Board's own conclusion under Issue No. 2, that Cosmopolitan has failed to show that it can adjust and maintain its directional antenna as proposed.

2. Among the issues set forth in the Commission's Memorandum Opinion and Order designating these applications for hearing (FCC 66-281, April 11, 1966) are the following:

"2. To determine whether the directional antenna systems proposed by the applicants can be adjusted and maintained as proposed.

-3-

"3. To determine in light of the evidence adduced under the preceding issue whether either proposal would provide adequate protection to Station KWKH, Shreveport, Louisiana."

3. It is important to note that Issue No. 2 refers to the adjustment and maintenance of the antenna arrays "as proposed." The question of protection to KWKH is reserved for an entirely separate issue, Issue No. 3. Two distinct conclusions are required.

4. Part and parcel of Cosmopolitan's directional antenna "proposal" are the MEOV set forth in the engineering exhibit accompanying the Cosmopolitan application. Those MEOV appear in the record herein on Page 21 of Cosmopolitan Exhibit E and Cosmopolitan Exhibit E-2. The specification of such MEOV is made necessary by Section 73.15D (a)(6) which requires the following showing where directional operation is proposed:

(6) In the event actual inverse distance field intensities expected to be determined in practice (that is, the values determined from actual measurements, particularly in sharp nulls) are different from the calculated values in subparagraphs (2) and (3) of this paragraph, the maximum expected operating values (MEOV) as well as the calculated values shall be shown on both the full patterns and the enlarged sections.

5. The MEOV specified by Cosmopolitan are an essential and required part of its directional antenna proposal. If the record shows that in practice the MEOV will be exceeded and that, in fact, other maxima of greater magnitude will exist, it

-4-

logically follows that it cannot be concluded that the array will be adjusted and maintained "as proposed."

6. In Paragraph 4 of its Decision, the Review Board correctly finds, after a discussion of the radiation in excess of MEOV which would result from discrete variations of phase and base current ratios of between plus or minus 0.1° and 0.1% in one case and 1.0° and 1.0% in others, that as finally adjusted

" . . . the operation of Cosmopolitan's directional antenna could be maintained within the specified MEOV's if the variations in the antenna parameters do not exceed more than two-tenths of one percent in current magnitude and two-tenths of a degree in phase." [Emphasis added.]

7. The Review Board further finds in Paragraph 7 of its Decision that the phase monitor which Cosmopolitan proposes to use in maintaining its array in adjustment is a minimum resolution capability of 0.5° and 0.5% in phase and base current ratio. This is, of course, not adequate to obtain the 0.2° and 0.2% readings required to be sure that MEOV are not exceeded. Therefore, the Review Board correctly found in Paragraph 7 that, even if Cosmopolitan were to use a more sensitive monitoring apparatus than that which it actually proposes to employ,

" . . . it would not provide adequate resolution for Cosmopolitan to maintain its radiation within the specified MEOV's."

-5-

8. The Review Board has, therefore, correctly concluded under Issue No. 2 that Cosmopolitan has failed to show that it will adjust and maintain its directional antenna as proposed. Despite that conclusion, the Review Board, later in Paragraph 7 of its Decision, reaches the ultimate conclusion that Cosmopolitan's failure to meet Issue No. 2 is not disqualifying because Issue No. 3 as to the protection afforded Station KWKH can be resolved favorably to Cosmopolitan. In fact, as is discussed in greater detail below, the Decision goes so far as to specify operating parameters for Cosmopolitan which are in fact new MEOV.

9. Upon the basis of a thorough study of the Commission's decisions affecting directional antenna proposals, it is submitted that never before has an applicant been found to have failed to meet its burden of proof under an antenna adjustment and maintenance issue and still been found to be technically qualified. In these days of near saturation of the standard broadcast band, at a time when the entire future of standard broadcast allocations is under study by the Commission's staff, ^{1/} there can hardly be a more significant issue in the AM broadcast field than the significance of MEOV in connection with directional antennas

1/ See Report and Order, 13 FCC 2d 866 (1963).

-6-

and the legal consequences of a failure to show the ability to adjust and maintain a directional antenna as proposed.

10. Accordingly, the Commission must conclude that an important issue, not previously settled by the Commission, is presented herein and should agree to review the Decision herein. Mr. Huntley submits, however, that as shown below in Paragraphs 19 and 20 the inevitable consequence of the Board's conclusion under Issue No. 2 is the technical disqualification of Cosmopolitan.

B. The Action By The Review Board Which In Effect Amends Cosmopolitan's Application And Varies That Applicant's Evidentiary Presentation On The Board's Own Motion Without Notice Or Right To Voice Objection, Constitutes Prejudicial Procedural Error.

11. As stated above in Paragraph 8, the maximum radiation values imposed on Cosmopolitan by the Review Board in Paragraph 15(a) of the Decision constitute as a practical matter new MEOV which have not been proposed by Cosmopolitan and as to which the applicable procedural requirements have not been observed.

12. The Review Board has on its own motion specified new operating maxima for Cosmopolitan which are in most cases far in excess of the MEOV proposed by that applicant. The comparison is as follows:

-7-

<u>Azimuth</u>	<u>MEOV Specified By Applicant (mv/m)</u>	<u>MEOV Specified Paragraph 15(a) Of Decision (mv/m)</u>
346°	17.0	17.0
356°	<u>12.2</u>	<u>16.4</u>
6°	<u>9.5</u>	<u>12.5</u>
16°	<u>13.5</u>	<u>15.7</u>
26°	<u>20.0</u>	<u>20.7</u>
36°	17.5	17.5
46°	15.0	15.0
56°	20.5	20.5
66°	19.0	19.0

13. It is submitted that the Review Board's action is highly irregular, and constitutes prejudicial error.

14. MECV are an important part of an application specifying directional antenna operation. In fact, the Commission said in

Beacon Broadcasting System, Inc., FCC , 21 Pike &

Fischer RR 659 (1961), that a change in MEOV specifications constitutes a major amendment to an application. The procedures whereby technical amendments can be made to applications in hearing status are set forth in Section 1.522(b). There can be

little doubt that had Cosmopolitan, at this late date with the record closed, an Initial Decision outstanding, and exceptions thereto pending, sought to amend its application to modify MEOV, it would not be granted leave to do so because of an inability to show due diligence and good cause. WMGS, Inc., 14 FCC 2d

423, 13 Pike & Fischer RR 2d 1257 (1968); XXYZ Television, Inc.,

10 FCC 937, 10 Pike & Fischer RR 2d 681 (1967). Nevertheless,

the Review Board has modified the Cosmopolitan MEOV in its Decision.

15. Even more importantly, had Cosmopolitan sought to correct the defective MEOV by amendment at this time, the other parties would have the right to respond and to point out any prejudice which they may suffer if leave to amend were granted. That right is provided by Section 1.294 of the Commission's Rules. Needless to say, H. H. Huntley has received no notice of the intention to amend MEOV and has not been afforded an opportunity to oppose that action.^{2/}

16. This is procedural error which is highly prejudicial to Mr. Huntley. He has prosecuted his application for almost four years. He has participated in this costly hearing proceeding for almost three years. He has a right to insist that the procedural rights made available to him by law be observed. He has the right to insist that this matter be determined on the hearing record and on that record alone. Any procedure whereby the Review Board, deus ex machina, intervenes unilaterally to substitute extra record data as a basis for its decision, and on its

2/ See Brown Broadcasting Co., Inc., 12 FCC 2d 189, 12 Pike & Fischer RR 2d 826 (1968), where the right of other parties to oppose was observed in the case of a post decision amendment.

own motion seeks to cure an evidentiary deficiency of one of two mutually exclusive parties to a hearing, renders the hearing process a travesty. If Cosmopolitan must be disqualified for its failure to provide its technical qualifications, so be it. It is not the role of the Review Board to remedy the deficiency and, in so doing, unbalance the scales of equity which must govern adversary proceedings.

17. The Commission must review this highly unusual and prejudicial procedural action.

C. The Procedure Whereby The Review Board Has Substituted New MEOV For Those Proposed By Cosmopolitan Departs From Established Commission Policy.

18. The policy and procedures followed by the Commission in the case of MEOV are clearly stated by the Review Board in Edina Corp., FCC , 24 Pike & Fisher RR 436 (1962). In Edina it is stated that the practice of the Commission in issuing construction permits to specify the MEOV "proposed by the applicant." It is also said that where a proof of performance shows that radiation will exceed MEOV a license cannot issue. The reason is that a permittee cannot be licensed ". . . for any other radiation pattern than that proposed in its application." From the context, it is obvious that the "application" referred to is the application for construction permit.

-10-

19. The Edina case is important to this proceeding for two reasons. First, it makes it clear that the MEOV regularly specified in a construction permit are the MEOV specified by the applicant in its application for construction permit. The procedure followed by the Review Board herein departs from the usual practice. The second reason why Edina is important herein is the fact that it declares that if the MEOV proposed by the applicant are shown to be excessive in practice a license cannot issue. It is merely a logical corollary that, if the record of an evidentiary hearing shows that the MEOV proposed by the applicant cannot be maintained, the construction permit cannot issue. It makes no sense to permit an applicant to construct a costly facility which the record already shows can never be licensed.

20. Edina stands for the proposition, therefore, that a demonstrated inability to maintain the radiation of a directional antenna within MEOV is a fatal defect, whether the fact is demonstrated in a license application or, at an earlier time, after an evidentiary hearing. Consequently, the Review Board's conclusion that Cosmopolitan cannot adjust and maintain as Cosmopolitan proposed in its application must result in disqualification.

11-570-1

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D. The Section 307(b) Determination
Departs From Precedent And Is
Based On An Erroneous Weighing
Of The Facts

21. It is Mr. Huntley's position that the Cosmopolitan applications must be denied under the antenna adjustment and maintenance issue. Thus, it was also error for the Review Board to base its Decision on Section 307(b) of the Communications Act of 1934, as amended, when one of the two applicants is not technically qualified. The magnitude of the error is increased by the fact that the unqualified applicant has been preferred under the Section 307(b) issue.

22. Nevertheless, on the basis of the Section 307(b) issue itself, there are important questions presented by this Decision which require review by the Commission. In its Decision, the Review Board has:

- a. Given weight to alleged area transmission needs to an extent unprecedented in Commission decisions and has misapplied the principle enunciated in Radio Haddonfield, Inc., 37 FCC 168, 3 Pike & Fischer RR 2d 25 (1964).
- b. Attributed unprecedented and unwarranted weight to the status of a community as a county seat.

23. The Review Board has chosen to prefer Edna over Yoakum under the Section 307(b) issue on two related grounds. The first is the comparative growth patterns of the counties in which each community is located. Ignoring Yoakum's larger size (5761

-12-

persons as compared to 5038 persons; a 14.4% superiority^{3/}) and its obvious . superiority as an industrial and commercial center, the Review Board has concluded in Paragraph 14 of its Decision that the growth in population of the county in which Edna is situated and the decline in population in the two counties in which Yoakum is located mean that Edna has the greater need for a transmission service. The Board cites Radio Haddonfield, Inc., supra, and Five Cities Broadcasting Co., Inc., 35 FCC 501, 504, 1 Pike & Fischer RR 2d 279, 283 (1963) in support of this conclusion. Those cases have been misapplied.

24. The basic test of the relative need of communities for a transmission service is the number of standard broadcast facilities in each of the communities and the populations of these communities, Kent-Ravenna Broadcasting Co., FCC, 22 Pike & Fischer RR 611 (1962). On the basis of that standard , Yoakum, with the greater population, has the greater need for a transmission service. Both Yoakum and Edna now have no such facility.

25. Under Kent-Ravenna it is not permissible, in most cases, to look beyond the communities involved, for example to counties or regions, in assessing the need for a transmission service. The comparison of communities usually stops at the city

3/ Hunley Ex. 2 , P. 2 ; Cosmopolitan Ex. 1, P. 1.

-13-

limits. In Five Cities Broadcasting Co., Inc., 35 FCC 501, 1 Pike & Fischer RR 2d 279 (1963), and, earlier in Pioneer States Broadcasters, Inc., 34 FCC 625, 25 Pike & Fischer RR 221, review denied (1963), the Review Board held that where there is a substantial difference in the number of reception services available to the communities being compared (Pioneer States) or where one community is "overshadowed" by a nearby metropolis (Five Cities), the relative importance of each community to the area which the proposed stations will serve is also a factor to be considered. "Overshadowing" was also the principal basis for a similar Review Board holding in Radio Haddonfield, Inc., supra.

26. In the present case, those special circumstances which warrant a departure from the Commission's statement of policy in Kent-Ravenna are simply not present. Yoakum and Edna receive the identical number of reception services (Decision, Paragraphs 12 and 13). Hence, there is no Pioneer States situation. In addition, neither Yoakum nor Edna are "overshadowed" by a nearby metropolis. Five Cities and Radio Haddonfield are thus distinguishable from the facts here present.

27. Thus the Review Board herein has departed from the test prescribed by the Commission itself, and has extended its own

-14-

holdings in more recent cases to a set of facts entirely different from those on which those exceptions from the general rule were based. Therefore, this major new approach to Section 307(b) comparisons requires Commission review.

28. As stated above, the Review Board has also assigned to Edna's status as a county seat a decisional significance which is without precedent in prior Commission decisions. To be sure the Commission has granted Section 307(b) preferences to communities which happened to be county seats, c. f. Radio Haddonfield, Inc., supra; Border Broadcasters, Inc., FCC , 13 Pike & Fischer RR 463 (1956); Southern Indiana Broadcasters, Inc., 24 FCC 521, 15 Pike & Fischer RR 349 (1958). In each of those cases, however, the fact that the preferred community was a county seat was just one fact which was overshadowed by others of greater decisional significance. The fact is that in its Findings of Fact and Conclusions of Law, its Reply Findings and Conclusions, its Brief In Support of Exceptions and in its oral argument before the Review Board, Cosmopolitan has been unable to cite a single Commission decision or policy statement which assigns to county seat status any special decisional significance.

29. It is a well known fact that the fact that a community is a county seat is often the result of historical accident. There is

-15-

no correlation between the size and needs of a community and the fact that it is a county seat. To cite a nearby example, it cannot seriously be maintained that Rockville, Maryland, the county seat of Montgomery County (1960 pop. 26,090) has a superior need for a transmission service to Silver Spring, the largest community in the County and the third largest city in the State (1960 pop. 66,348). Nevertheless, the Review Board in a case where the question of area need is not of decision significance, c.f. Kent-Ravenna Broadcasting Co., supra, has granted special weight to county seat status. In so doing, it has held that Edna's status as such outweighs Yoakum's superiority in census population and economic and commercial importance and the greater technical efficiency of Mr. Huntley's proposal. This innovation by the Review Board must be reviewed by the Commission.

III. Conclusion

30. This Application For Review presents the Commission with a clear case where the Review Board had taken action which conflicts with case precedent and established Commission policy, and which at the same time presents novel questions of law and policy not previously resolved by the Commission. In achieving that result the Board has also committed prejudicial procedural error and has ignored or undervalued relevant and material facts of record.

-16-

31. For the reasons set forth above, this case presents the Commission with a Decision which is erroneous and which must be reviewed and set aside.

WHEREFORE, the premises considered, it is requested that the Commission grant this Application For Review and agree to review the Decision of the Review Board herein.

Respectfully submitted,

H. H. HUNTLEY

By Haley, Bader & Potts

1s/ William J. Potts Jr.
William J. Potts, Jr.

1735 DeSales Street, N. W.
Washington, D. C. 20036

His Attorneys

January 16, 1969

CERTIFICATE OF SERVICE

I hereby certify that copies of the foregoing "Application For Review" were this 16th day of January, 1969, sent by United States mail, postage prepaid, to the following:

Jerome S. Boros, Esquire
Fly, Shuebruk, Blume and Gaguine
30 Rockefeller Plaza
New York, New York 10020
Counsel for Cosmopolitan Enterprises, Inc.

Harry J. Ockershausen, Esquire
Dempsey and Koplovitz
938 Bowen Building
Washington, D. C. 20005
Counsel for International Broadcasting
Corporation

Vergil W. Tacy, Esquire
Broadcast Bureau
Federal Communications Commission
Washington, D. C. 20554

✓
1st D. Lee Sheiry
D. Lee Sheiry

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Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D. C. 20554

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FCC 69-798
34794

In re Applications of)
COSMOPOLITAN ENTERPRISES, INC.)
Edna, Texas)
H. H. HUNLEY)
Yoakum, Texas)
For Construction Permits)

DOCKET NO. 16572 ✓
File No. BP-16347
DOCKET NO. 16573
File No. BP-16570

O R D E R
Adopted: July 23, 1969 ; Released: July 25, 1969

By the Commission:

1. The Commission has before it for consideration: the Decision of the Review Board in this proceeding, 15 FCC 2d 650, released December 17, 1968; an application for review of the Decision, supra, filed by H. H. Huntley on January 16, 1969; comments filed by the Chief, Broadcast Bureau on January 31, 1969; opposition to the application for review filed by Cosmopolitan Enterprises, Inc. on February 5, 1969; comments on the application for review filed by International Broadcasting Corp. (WKHK) on February 5, 1969; and H. H. Huntley's reply to pleadings responsive to the application for review filed on February 24, 1969.

2. IT IS ORDERED, That the above-described application for review IS DENIED.

FEDERAL COMMUNICATIONS COMMISSION

Ben F. Waple

Ben F. Waple
Secretary

SIGNED BY ABOVE
MAILED BY

JUL 25 1969

AXT
MAIL & FILES

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COSMOPOLITAN ENTERPRISES, INC.

Exhibit No.

Page 1

Ex. E

ENGINEERING STATEMENT CONCERNING
APPLICATION OF COSMOPOLITAN ENTERPRISES, INC.

FOR

CONSTRUCTION OF STANDARD BROADCASTING STATION

EDNA, TEXAS 1130 KC., 10 KW., DA-DAY, CLASS II

FILE NO. BP-16347

DOCKET NO. 16,572

Federal Communications Commission	
Docket No.	16572 ^{et al} Exhibit No. Exhibit E
Presented by	Cosmopolitan
Disposition	Identified <input checked="" type="checkbox"/>
	Received <input checked="" type="checkbox"/>
	Rejected <input type="checkbox"/>
Reporter	D.G.
Date	7/11/66

JUNE 1966

PAUL GODLEY COMPANY
CONSULTING RADIO ENGINEERS
LITTLE FALLS, N. J.

STATE OF NEW JERSEY: }
COUNTY OF PASSAIC: } SS

PAUL F. GODLEY, JR., a Consulting Radio Engineer, who is known to me, deposes and says that: he resides in Little Falls, New Jersey; that he is a graduate engineer (Bucknell University, E.E., 1943); that he is associated with the Paul Godley Company in matters having to do with radio allocation, radio propagation, radio system design, directive antenna design, installation, adjustment, and associated field intensity measurements; that the attached was prepared by him or under his immediate supervision; and that the statements contained therein are true to the best of his knowledge and belief.

The field intensity measurements discussed in the attached statement were made by the affiant, or under his immediate supervision, on June 9 and 10, 1966.

Signed:

Paul F. Godley, Jr.

SUBSCRIBED AND SWORN TO before me
this 15th day of June, 1966.

Signed: Barry J. Koch
Notary Public

NOTARY PUBLIC OF NEW JERSEY
My Commission Expires June 30, 1969

ENGINEERING STATEMENT CONCERNING
APPLICATION OF COSMOPOLITAN ENTERPRISES, INC.
FOR
CONSTRUCTION OF STANDARD BROADCASTING STATION
EDNA, TEXAS 1130 KC., 10 KW., DA-DAY, CLASS II

The application of Cosmopolitan Enterprises, Inc. (hereinafter referred to as Cosmopolitan) for the use of 1130 Kc. at Edna, Texas has been designated for hearing before the Federal Communications Commission in consolidation with:

H. H. HUNTLEY Docket No. 16,573
Yoakum, Texas File No. BP-16,570
Requests: 1130 Kc., 10 Kw., DA-D, Class II

This statement covers engineering exhibits and information as required by, and set forth within the hearing issues.

Basic features of the proposed Edna plant are described herein. A summary of the proposed technical specifications is found in TABLE I attached.

ALLOCATION FACTORS - DAY

Only those existing or proposed operations set forth within the hearing issues are discussed. To the best of affiant's knowledge and belief, the proposed Edna operation would not conflict with any other existing stations or applications not made a party to this proceeding.

1130 KC. APPLICATION - YOAKUM, TEXAS

The Edna transmitter site is approximately 34 miles from Yoakum. Due to this proximity, and the nature of the transmitting plants proposed for Edna and Yoakum, the degree of mutually destructive interference would be prohibitive if the two were to operate

simultaneously. Under these circumstances, the degree of interference has not been determined or shown and no further reference is made to the proposed Yoakum operation.

KWKH 1130 KC., 50 KW. DA-N, Shreveport, La.

The KWKH partial, 0.1 mv/m normally protected contour is shown on Figure 3 as based upon field intensity measurements made by the KWKH engineer along 5 radials extending nearly to or beyond the 0.1 mv/m contour and upon measurements made by this office along two stub radials which straddle the 0.1 mv/m contour.

The proposed Cosmopolitan operation will not interfere with the normally protected 0.1 mv/m contour of KWKH.

CONDUCTIVITIES AND EFFECTIVE FIELDS

Conductivities used for projecting and mapping the proposed Cosmopolitan contours, as shown and discussed herein, have been based on FCC Figure M3. Conductivities used for projection and mapping of other services have also been based upon FCC Figure M3. The KWKH partial contour is based upon field intensity measurements as described above. In utilizing FCC Figure M3 where more than one value of conductivity was involved, use was made of the equivalent distance method of combining conductivities.

Effective fields for the directional operations involved were determined from measured or proposed horizontal plane radiation patterns on file with the FCC. The effective fields for omnidirectional operations were obtained from the "Official List for Information Setting Forth Notified Assignments of Standard Broadcast Stations of the United States".

DETERMINATION OF AREAS AND POPULATION

All area and population information required for this study was determined as stated in the footnote of TABLE II.

PROPOSED COSMOPOLITAN SERVICE AREA

1 Pertinent proposed Cosmopolitan coverage areas are shown on
2 Figures 3 through 6, being based on effective fields from the
3 horizontal radiation pattern of Figures 1 and 2 and conductivities
4 from FCC Figure M3.

5 Including Edna, 11 urban communities of Texas will, in whole or
6 part, receive a new 2 mv/m or better signal from the proposed
7 Cosmopolitan operation. The urban areas gaining a new service
8 contain a population of 86,608 persons as listed in TABLE V.
9 Pertinent areas and populations for the proposed operation are
0 listed in TABLE II.

1 The proposed operation would be the first local service for Jackson
2 County where Edna is the County Seat. Edna is not a part of any
3 urbanized or metropolitan area as defined by the 1960 Census.
4 Edna is a growing city having increased its population by 30.7
5 percent between the 1950 and 1960 U. S. Census. Jackson County
6 has increased its population by 8.7 percent between the 1950 and
7 1960 U. S. Census.

OTHER SERVICES

8 Study of the areas enclosed by the proposed Cosmopolitan 2 and
9 0.5 mv/m coverage contours finds other broadcast services as
0 shown on Figures 5 and 6. TABLES III and IV carry a listing of
1 the stations whose 2 mv/m and 0.5 mv/m contours are delineated on
2 the map figures.

ANTENNA ADJUSTMENT AND MAINTENANCE (Issue 2)

3 There are four basic categories in which factors affecting the
4 ease of initial adjustment and maintenance of that adjustment can
5 be grouped. These groups are theoretical design, antenna site
6 suitability, physical design, and adjustment and maintenance aids.

The nature of the allocation situation here necessitates a considerable suppression of radiation to the north. It is the purpose of this discussion to show that attainment and maintenance of the radiation pattern as proposed will be possible.

Theoretical Design

While this office did not initiate the directive antenna design, all facets have been re-computed and checked in detail. The system utilizes three, quarter-wave towers spaced 0.416 wavelengths apart. The wide spacing between towers tends toward smaller than average mutual coupling impedances which in turn provide for higher tower operating (driving point) resistances. Operating resistances average more than 40 ohms, being 22.95 ohms at number 1, 40.52 ohms at number 2 and 58.95 ohms at tower number 3. Small ohmic variations which might be caused by temperature changes, condensation, or changes in soil moisture are relatively insignificant when compared with large operating resistances. Noticeable changes in the assumed losses of 1 ohm per tower can result in only minor variations in individual tower impedances. In addition, these natural changes would be expected to affect all towers simultaneously creating little chance for variations between individual tower currents and phases.

The high base operating impedances develop, by virtue of their inverse square root relationship, low tower feed currents. This means low power losses caused by the stray resistances found in all systems. Within the proposed system, the highest tower base current will be on the order of 12.5 amperes. Overall system losses, assuming one ohm per tower, will be less than 240 watts. This low total loss (about 2.5%) indicates that there will be a minimum of circulating current and tends to enhance the system stability.

Rigorous mathematical analyses indicate good system stability. It is found that center tower current variations of well over $\pm 1\%$

(approximately double this in end towers) can be tolerated without causing interference to any other station. Nor will variations in phase of well over $\pm 1^\circ$ in any tower cause radiation which would result in interference to any other station. See the discussion on Issue 3 concerning protection to WKH.

Radiated fields below 15 mv/m are required only over an arc of approximately 30 degrees. Within this small segment, adjustment of the several tower currents and phases can be made to compensate for variations in radiation from individual radiations as well as for any reradiation that might occur. The work involved in adjusting a directional antenna is reduced when, as in this case, low fields are required only over a relatively small arc rather than over a large arc such as 60 to 100 degrees or more.

Site Suitability

On June 10, 1966 affiant visited the proposed Cosmopolitan antenna site for a personal inspection.

The site is located in a sparsely populated area and the surrounding land is flat and covered primarily with fields intended for grazing. Within a half mile radius there are less than 10 residences.

Except for these residences their associated farm sheds and the usual wooden pole utility lines servicing them, there are no structures within a half mile or even a mile which might cause reflection or reradiation. The one story frame homes and sheds should not cause any reflection or re-radiation of signal. Previous experience has shown that wooden pole utility lines do not cause significant re-radiation.

Physical Design

The physical design and construction of the antenna system will be directed toward the minimization of all factors that might cause

1 changes in the radiation pattern. To this end certain procedures
2 and features will be utilized as required, these are as follows:

- 3 a. Slim triangular section towers will be used so the
4 current distribution will approach the theoretical.
- 5 b. Non-conducting, non-magnetic "Glastron" fiberglass-
6 epoxy guy line will be used to eliminate any pos-
7 sibility of guy re-radiation and to avoid all
8 chance of capacitive loading which might affect the
9 current distribution.
- 0 c. The towers will be hot-dipped galvanized to mini-
1 mize ohmic loss and prevent corrosion and deterio-
2 ration.
- 3 d. Each tower section will be field welded to the next
4 section at each leg.
- 5 e. Tower lighting cables will be routed inside the
6 tower to prevent any possibility of variations in
7 current distribution or impedance.
- 8 f. Electric power for tower lighting will be fed to the
9 tower via "Austin" type transformers in order to
0 minimize base loading and provide the most stable
1 method of tower lighting.
- 2 g. Tower lighting beacons will be shielded by lightning
3 rods to protect the beacon and to minimize top
4 loading variations which might be caused by lamp
5 failure or conductive moisture or dirt accumulations
6 on the glass housing.
- 7 h. A 48 foot by 48 foot expanded copper ground screen
8 is to be placed about the base of each tower to
9 minimize variations in base capacity which might be
0 caused by temperature and moisture changes in the
1 soil.
2
- 3 i. The vegetation in the area of the screen will be
4 completely controlled by chemical means so as to
5 eliminate any possibility of variations caused by
6 nearby vegetation.
- 7 j. Ground system areas beyond the screen will be kept
8 mowed to reduce the possibility of any variations
9 which might be caused by growth of plant life in the
area.

1 k. Orangeburg or Transite conduits will be buried 12
2 to 18 inches beneath the soil surface. The conduits
3 will carry the transmission lines, sampling lines,
4 signal and power circuits. The underground location
5 will protect the feed lines and avoid variations
6 which might be caused by uneven or rapid temperature
7 changes.

8 l. Semi-flexible coaxial transmission line will be
9 utilized in continuous lengths to eliminate any prob-
10 lems which might be encountered with intermediate
11 joints. The cable will be jacketed for additional
12 mechanical protection. Air dielectric will be
13 utilized for more permanent and trouble-free service.
14 Over size 1 5/8 inch diameter cable with an average
15 power rating of 150 kilowatts at the operating fre-
16 quency will be utilized to minimize variations which
17 might be caused by the power flow to each tower.

18 m. The sampling lines will be equal length air dielectric
19 coaxial cable of the best quality.

20 n. Fences required to prevent unauthorized access to the
21 towers will be constructed of fibre glass to avoid
22 base loading effects and minimize variations which
23 might be caused by moisture absorbtion.

24 o. The phasing and tower matching components will be
25 housed at each tower in an insulated, fibre glass "dog"
26 house equipped with thermostatically controlled electric
27 heat and air conditioning. With this arrangement all
28 inductors, capacitors, meters, etc., which are used to
29 feed the towers will remain at a nearly fixed tempera-
30 ture to essentially eliminate any variations which
31 might be caused by ambient temperature changes.

32 p. All phasing and power dividing components in the trans-
33 mitter building will be maintained at room temperature
34 by climate control facilities.

35 q. All phasing matching and power dividing components will
36 be designed with excess ratings and for maximum sta-
37 bility. Variable vacuum capacitors will be utilized
38 throughout to completely circumvent the need for
39 rolling, sliding, or friction contacts associated with
40 the usual inductive components.

41 r. No relays will be utilized in the radio frequency
42 circuits.

1 s. All interconnections will be made of semi-hard copper
2 tubing to eliminate the possibility of variations which
3 might be encountered with flexible strapping.

4 The number and nature of the procedures and features listed is
5 evidence that particularly careful design can lead to considerably
6 better than normal stability. Some of the features have been
7 recently developed, some are well known and, applied together,
8 a system of exceptional stability will result.

Adjustment and Maintenance Aids

9 The major adjustment and maintenance aid is that of good basic
10 design theoretical, electrical, and mechanical, but in addition
11 a new type solid state phase monitor will be utilized. The
12 new Vitro Type 112 phase monitor is easier to read accurately and
13 is not affected by modulation.

14 Adjustment and maintenance will be facilitated by the relatively
15 flat, open terrain. Most measuring points will be considerably
16 removed from the nearest wires and buildings. While this isola-
17 tion may necessitate some cross country hiking, there are ample
18 tree clumps, irrigation ditches, farm lanes, and fences shown on
19 the recent, large scale topographical maps. These map features
20 will permit accurate orientation in the field and provide for
21 excellent repeatability of measurement checks or of monitoring
22 points.

23 In the specified directions two or more monitoring points will be
24 selected in the manner required by the rules and regulations.
25 Selection of the monitoring points will be made so as to permit
26 detection and analysis of variations caused by uncontrollable
27 changes in the soil conductivity between the check points and the
28 antenna. Relatively large variations in monitoring point fields
29 can often be entirely attributed to conductivity changes and
30 should not be mistaken for antenna system instability.

PROTECTION TO KWKH, SHREVEPORT, LA. (Issue 3)

A portion of the normally protected KWKH, Shreveport 0.1 mv/m contour is shown upon the map Figure 3. The contour location is based upon radial measurements made essentially to or beyond the specified contour. Five of the measured radials utilized were made by KWKH engineers in 1941 and these are shown for reference in Figures 11 through 15. Two stub radials were made by this office in June 1966. The stub radials which factually locate the KWKH 0.1 mv/m contour between the KWKH radials are plotted with a tabulation of data on Figures 7 and 8.

Figure 3 also shows the proposed Cosmopolitan 0.005 mv/m contour based upon M.E.O.V. fields. Examination of geographic location of the protected and nuisance contours shows that the proposed 0.005 mv/m contour (based upon MEOV) falls from 20 to 72 miles short of the KWKH normally protected contour with the average separation being over 40 miles.

Computations have been made to determine the maximum excursion of radiated fields with assumed variations of plus or minus one degree in phase or plus or minus one percent in current in the parameters of the proposed Cosmopolitan directional antenna system. The maximum excursion of radiated fields occurs with variation of the center tower parameters. Assuming center tower variations of $\pm 1^\circ$ in phase or $\pm 1\%$ in current, the maximum radiated field excursion was determined and is listed for the null area in TABLE VI.

Examination of TABLE VI shows that there is a considerable additional tolerance available even after assumed parameter variations of plus or minus 1 degree in phase or plus or minus 1 percent in current. Over most of the null zone area the additional tolerance exceeds 100 percent.

1 Twenty years of experience in adjusting directional antenna
2 systems has shown that it is considerably less difficult to
3 arrive at a pattern with one deep null than it is to hold fields
4 to low values across a large arc. In other words it is much
5 simpler to cancel the possible effects of scatter or re-radiation
6 in one direction than it is to correct for such over a large arc.

FIELD INTENSITY MEASUREMENTS

7 It was found desirable to supplement existing KWKH field intensity
8 measurements with two stub radials. Field intensity measurements
9 were made on June 9 and 10, 1966 along two KWKH radial paths.
0 The measurements straddle the KWKH 0.1 mv/m contour in a manner
1 which accurately locates the contour on a measured basis.

2 The geographical locations of the radials and the measuring sites
3 are shown on Figure 10. The field intensity measurements have
4 been plotted on appropriate log-log graph paper in Figures 7 and 8.
5 The field intensity data is tabulated upon the inset of the graph
6 figures.

7 The field intensity meter utilized for the measurements is a Nems
8 Clarke, Type 120 E, Serial 757. The instrument was last calibrated
9 by the manufacturer in March 1965. Within the last 30 days the
0 unit was checked against another field intensity meter and found
1 to be in agreement.

TABLE I
SUMMARY OF TECHNICAL SPECIFICATIONS

Proposed 1130 kc., 10 kw., DA-D

Edna, Texas

1	Transmitting Site:	North Latitude: 29° 01' 40" West Longitude: 96° 40' 05"
2	Number of Radiators:	Three (3)
3	Radiator Type:	Vertical, guyed, uniform cross section, base insu- lated.
4	Overall Height above grade level (add 3 ft. to include top obstruction lighting):	223 feet
5	Height above insulators:	220 feet
6	Electrical Height:	91 degrees
7	Orientation of towers:	Bearing 26 degrees true
8	Tower spacing:	150 degrees (363 feet)
9	Effective field:	555 mv/m (RMS) for 10 Kw.
0	Relative Radiated Field magnitude and current. phasing:	#1 North 0.5335/49.1° #2 Center 1.0 /0° #3 South 0.4916/-49.1°
1	Total loss (assuming 1 ohm loss per tower):	237.7 watts
2	Operating resistances:	#1 North 22.95 ohms #2 Center 40.52 ohms #3 South 58.95 ohms
3		

TABLE II
TABULATION OF POPULATION AND AREAS
Proposed 1130 kc., 10 kw., DA-D
Edna, Texas

<u>Contour (Daytime)</u>	<u>Population</u>	<u>Area</u>
25 mv/m	10,989	697 sq. miles
2 mv/m	166,768	7,795 sq. miles
0.5 mv/m	334,702	18,100 sq. miles

NOTES:

Population figures are based on the 1960 United States Census and have been determined in accordance with FCC Rules and Regulations. Uniform distribution of population was assumed for each minor civil division and no area defined as urban or urbanized was considered as being served if it lay outside of the respective 2 mv/m contour of the station under study.

All areas were measured by means of a polar planimeter with the exception that if a circular contour was involved the area was determined by computation.

TABLE III

LISTING OF STANDARD BROADCAST STATIONS WHICH PROVIDE A
SIGNAL OF 0.5 mv/m OR GREATER TO ALL OR PORTIONS OF THE
AREA WITHIN THE 0.5 mv/m CONTOUR OF PROPOSED EDNA

1130 KC. 10 KW., DA-D EDNA, TEXAS

<u>Station</u>	<u>Location</u>	<u>Daytime Facilities</u>	<u>75</u>	<u>50</u>	<u>25</u>	<u>Less than</u>
			<u>to 100%</u>	<u>to 100%</u>	<u>75%</u>	<u>50%</u>
KTSA	550 kc/s San Antonio	5 kw.		X		
KLVI	560 Beaumont	5 kw.		X		
KTBC	590 Austin	5 kw.		X		
KILT	610 Houston	5 kw. DA		X		
KMAC	630 San Antonio	5 kw. DA		X		
KIKK	650 Pasadena	0.25 kw.				X
KBAT	680 San Antonio	50 kw.	X			
KURV	710 Edinburg	0.25 kw.				X
KTRH	740 Houston	50 kw. DA	X			
KTHT	790 Houston	5 kw. DA			X	
KONO	860 San Antonio	5 kw.		X		
KNAF	910 Fredericksburg	1 kw.				X
KRIO	910 McAllen	5 kw. DA				X
KTLW	920 Texas City	1 kw.				X
KITE	930 Terrell Hills	5 kw.			X	
KPRC	950 Houston	5 kw.			X	
KHFI	970 Austin	1 kw. DA				X
KFRD	980 Rosenberg	1 kw.				X
KAML	990 Kenedy-Karnes	0.25 kw.				X
KODA	1010 Houston	1 kw. DA				X
KAWA	1010 Marlin-Waco	10 kw. DA				X
KCTA	1030 Corpus Christi	50 kw	X			
KOPY	1070 Alice	1 kw.			X	
KENR	1070 Houston	5 kw. DA			X	
KDRY	1110 Alamo Heights	1 kw.			X	
KCCT	1150 Corpus Christi	1 kw. DA			X	
KBER	1150 San Antonio	1 kw. DA				X
KOAI	1200 San Antonio	50 kw.		X		
KSIX	1230 Corpus Christi	1 kw.			X	
KNUZ	1230 Houston	1 kw.				X
KSOX	1240 Raymondville	0.25 kw.				X
KUKA	1250 San Antonio	1 kw.				X
KPAC	1250 Port Arthur	5 kw.				X
KTAE	1260 Taylor	1 kw.				X
KPSO	1260 Falfurrias	0.5 kw.				X

TABLE III continued

<u>Station</u>	<u>Location</u>	<u>Daytime Facilities</u>	<u>100%</u>	<u>75 to 100%</u>	<u>50 to 100%</u>	<u>25 to 100%</u>	<u>Less than 25%</u>
KIOX	1270	Bay City	1 kw.				X
KVWG	1280	Pearsall	0.5 kw.				X
KWHI	1280	Brenham	1 kw.				X
KRGV	1290	Weslaco	5 kw.				X
KVET	1300	Austin	5 kw. DA				X
KUBO	1310	San Antonio	5 kw. DA				X
KXYZ	1320	Houston	5 kw.				X
KINE	1330	Kingsville	1 kw.				X
KVIC	1340	Victoria	0.25 kw.				X
KCOR	1350	San Antonio	5 kw.				X
KRYS	1360	Corpus Christi	1 kw.				X
KWBA	1360	Baytown	1 kw. DA				X
KOKE	1370	Austin	1 kw.				X
KBOP	1380	Pleasanton	1 kw.				X
KULP	1390	El Campo	0.5 kw.				X
KUNO	1400	Corpus Christi	0.25 kw.				X
KILE	1400	Galveston	0.25 kw.				X
KNAL	1410	Victoria	0.5 kw.				X
KGNB	1420	New Braunfels	1 kw.				X
KCOH	1430	Houston	1 kw.				X
KEYS	1440	Corpus Christi	1 kw.				X
KCTI	1450	Gonzales	0.25 kw.				X
KBRZ	1460	Freeport	0.5 kw.				X
KCNY	1470	San Marcos	0.25 kw.				X
KIVL	1480	Pasadena	1 kw.				X
KAPE	1480	San Antonio	0.5 kw. DA				X
KNOW	1490	Austin	1 kw.				X
KIBL	1490	Beeville	0.25 kw.				X
KANI	1500	Wharton	0.5 kw. DA				X
KROB	1510	Robstown	0.5 kw.				X
KGBT	1530	Harlingen	50 kw.				X
KGBC	1540	Galveston	1 kw.				X
KEDA	1540	San Antonio	1 kw.				X
KGUL	1560	Port Lavaca	0.5 kw.				X
KIRT	1580	Mission	1 kw.				X
KWED	1580	Seguin	1 kw.				X
KYOK	1590	Houston	5 kw.				X
KTOD	1590	Sinton	1 kw. DA				X
KBOR	1600	Brownsville	1 kw. DA				X
KCFH	1600	Cuero	0.5 kw.				X

Number of stations including 100%

3

Number including 75-100%

5

Number including 50-75%

1

Number including 25-50%

22

Number including less than 25%

44

TABLE IV

STANDARD BROADCAST STATIONS PROVIDING A 2 MV/M COVERAGE
TO AREAS WITHIN THE PROPOSED EDNA 2 MV/M CONTOUR

1130 KC. 10 KW., DA-D EDNA, TEXAS

<u>Station</u>	<u>Location</u>	<u>Daytime Facilities</u>	<u>100%</u>	<u>75%</u>	<u>50%</u>	<u>25%</u>	<u>Less than 25%</u>
TSA	550 kc/s	San Antonio	5 kw.			X	
TBC	590	Austin	5 kw.			X	
ILT	610	Houston	5 kw. DA				X
MAC	630	San Antonio	5 kw. DA			X	
BAT	680	San Antonio	50 kw.	X			
FRH	740	Houston	50 kw. DA	X			
FHT	790	Houston	5 kw. DA				X
ONO	860	San Antonio	5 kw.				X
ITE	930	Terrell Hills	5 kw.				X
FRD	980	Rosenberg-Richmond	5 kw.				X
ML	990	Kenedy-Karnes	0.25 kw.				X
CTA	1030	Corpus Christi	50 kw.	X			
DAI	1200	San Antonio	50 kw.		X		
SIX	1230	Corpus Christi	1 kw.				X
IOX	1270	Bay City	1 kw.				X
UBO	1310	San Antonio	5 kw. DA				X
VIC	1340	Victoria	0.25 kw.			X	
RYS	1360	Corpus Christi	1 kw.				X
JLP	1390	El Campo	0.5 kw.				X
UNO	1400	Corpus Christi	0.25 kw.				X
NAL	1410	Victoria	0.5 kw.			X	
EYS	1440	Corpus Christi	1 kw.				X
CTI	1450	Gonzales	0.25 kw.				X
FRZ	1460	Freeport	0.5 kw.				X
BL	1490	Beeville	0.25 kw.				X
ANI	1500	Wharton	0.5 kw. DA				X
GUL	1560	Port Lavaca	0.5 kw.			X	
VED	1580	Sequin	1 kw.				X
FOD	1590	Sinton	1 kw. DA				X
CFH	1600	Cuero	0.5 kw.				X

TABLE VLISTING OF URBAN COMMUNITIES INCLUDED IN WHOLE OR PART
WITHIN THE 2 MV/M CONTOUR OF THE PROPOSED OPERATION1130 KC. 10 KW., DA-D EDNA, TEXAS

<u>Urban Area</u>	<u>Total Urban Population (1960)</u>	<u>Urban Population Gaining Service from Proposed Edna</u>	<u>Number of other 2 mv/m services Available</u>
Edna	5,038	5,038	8
Bay City	11,656	11,656	6
Cuero	7,338	7,338	8 to 9
Gonzales	5,829	2,915	7
Hallettsville	2,808	842	5
Palacios	3,676	3,676	5 to 6
Port Lavaca	8,864	8,864	5
Refugio	4,944	4,944	6
Victoria	33,047	33,047	9
Yoakum	5,761	5,761	8
Yorktown	2,527	2,527	7 to 9
	Total	86,608	

TABLE VI
TABULATION OF RADIATION

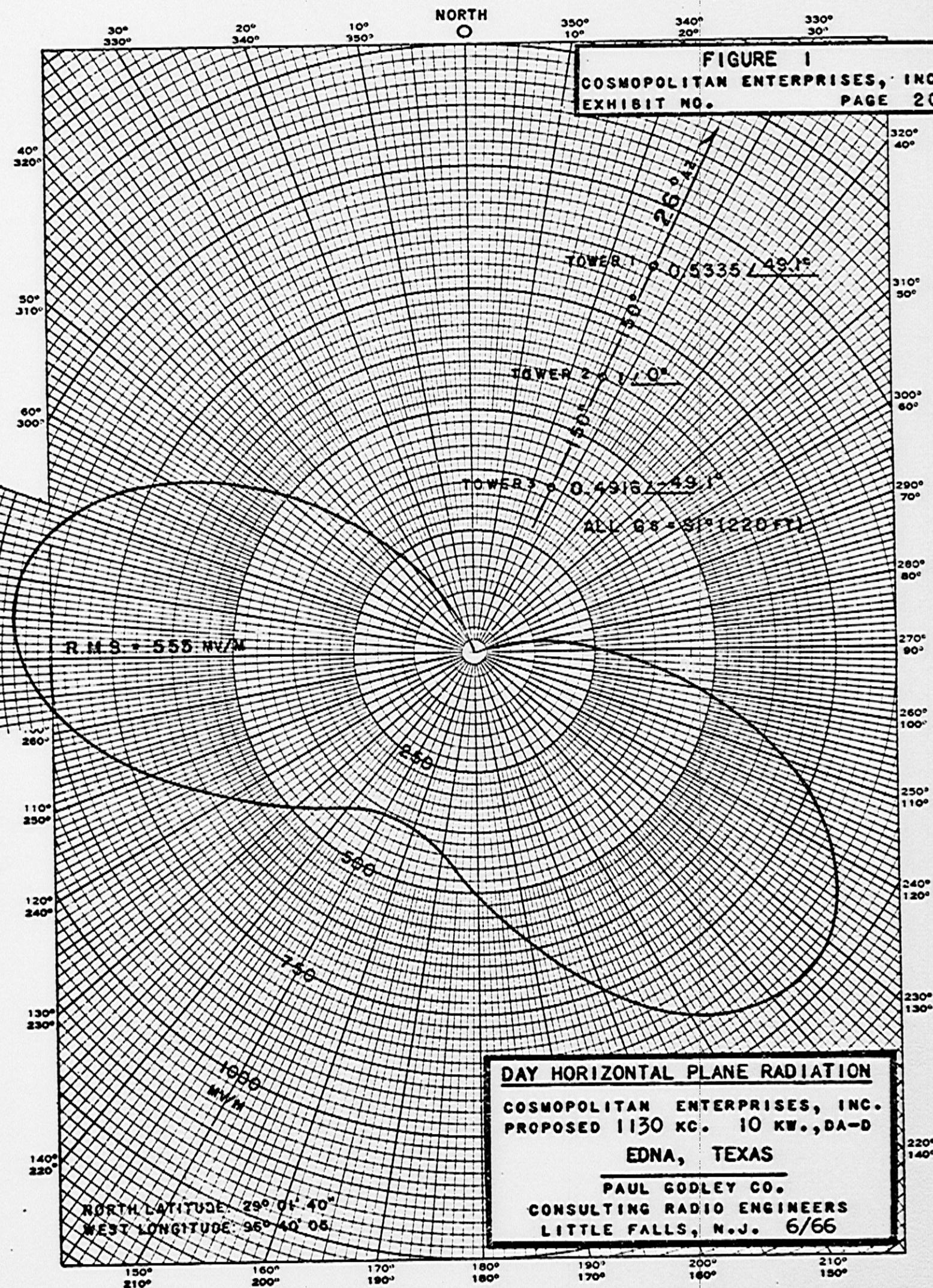
BASED ON 1% and 1° VARIATIONS OF CENTER TOWER PARAMETERS

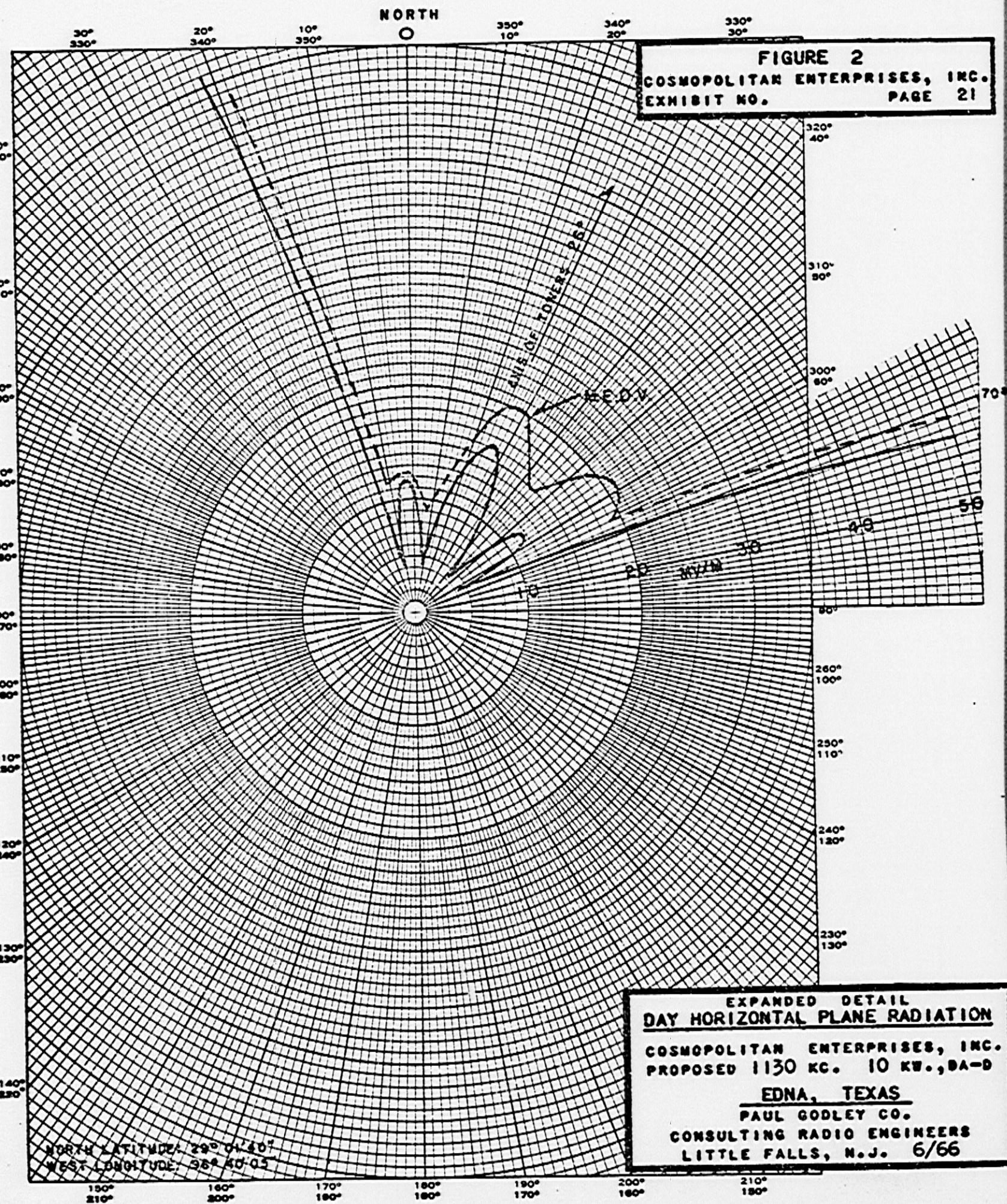
Proposed 1130 kc., 10 kw., DA-Day, Edna, Texas

<u>Azimuth</u>	<u>Ø</u>	<u>Theor. Field mv/m</u>	<u>Maximum* Variation mv/m</u>	<u>Allowable Field mv/m</u>	<u>Additional Tolerance /1</u>
1	336°	50°	73.8	78.5	-
2	341	45	33.6	38.1	-
3	346	40	8.8	12.8	69%
4	351	35	7.6	12.1	72
5	356	30	11.7	16.4	22
6	1	25	9.6	14.3	82
7	6	20	5.6	12.5	143
8	11	15	5.8	13.2	180
9	16	10	10.4	15.7	177
10	21	5	14.1	19.5	144
11	26	0	16.1	20.7	117
12	31	5	14.1	19.5	97
13	36	10	10.4	15.7	127
14	41	15	5.8	13.2	161
15	46	20	5.6	12.5	360
16	51	25	9.6	14.3	483
17	56	30	11.7	16.4	348
18	61	35	7.6	12.1	405
19	66	40	8.8	12.8	337
20	71	45	33.6	38.1	-
21	76	50	73.8	78.5	-

* Maximum possible excursion of radiated field for a single azimuth with center tower phase variation of $\pm 1^\circ$ or current variation of $\pm 1\%$.

/1 Additional tolerance is that which remains available after the 1% or 1° variations in parameters.





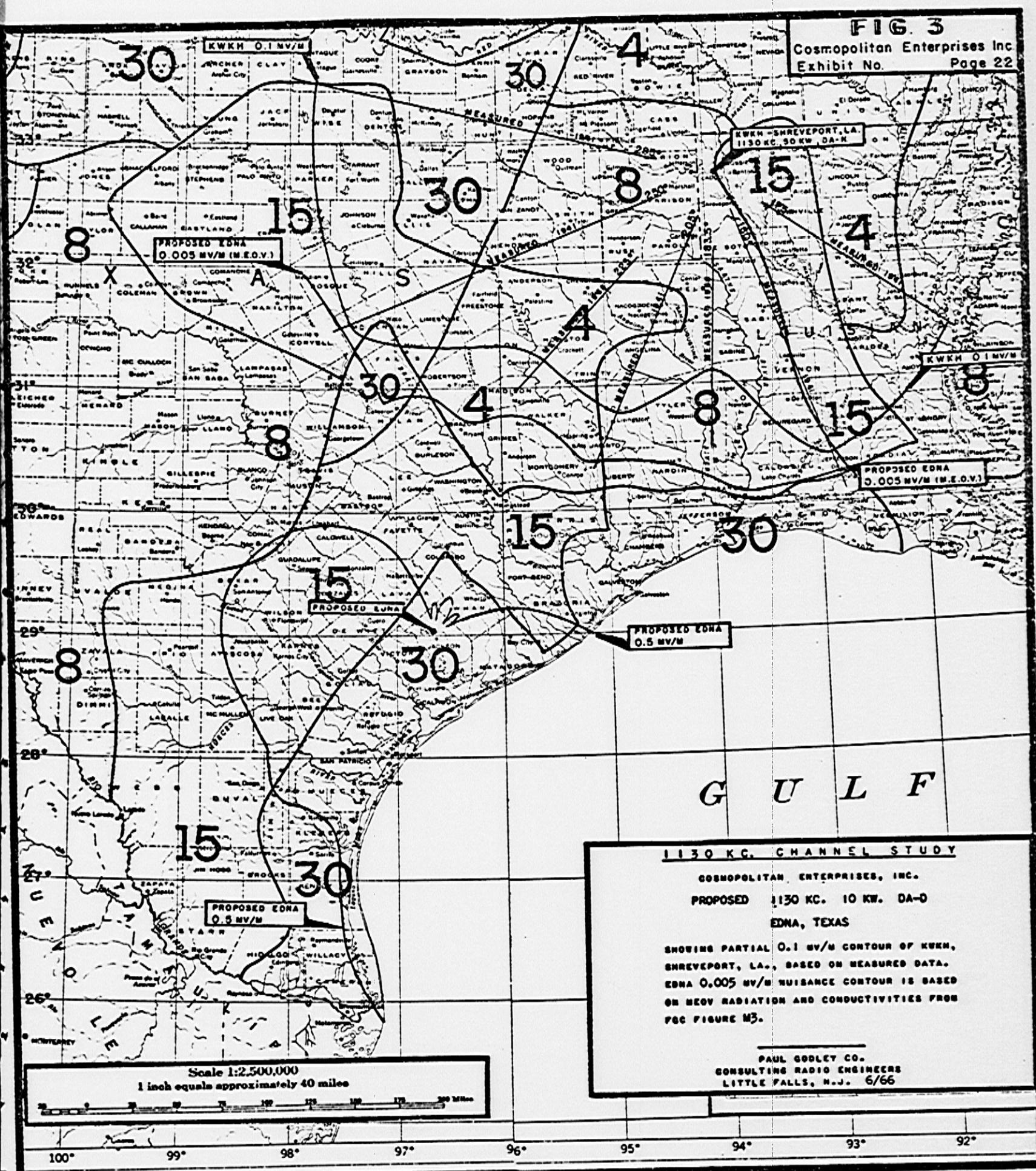
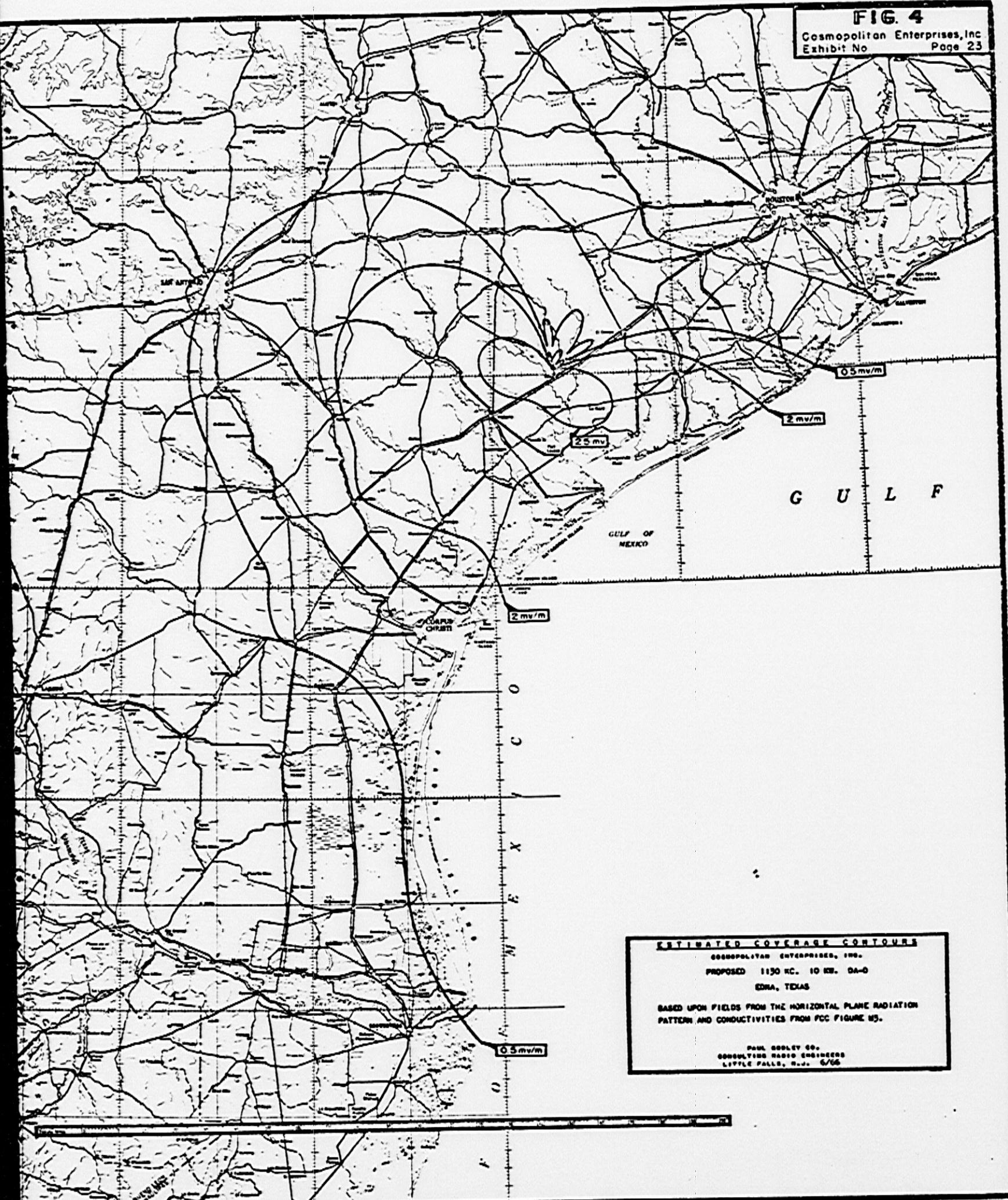
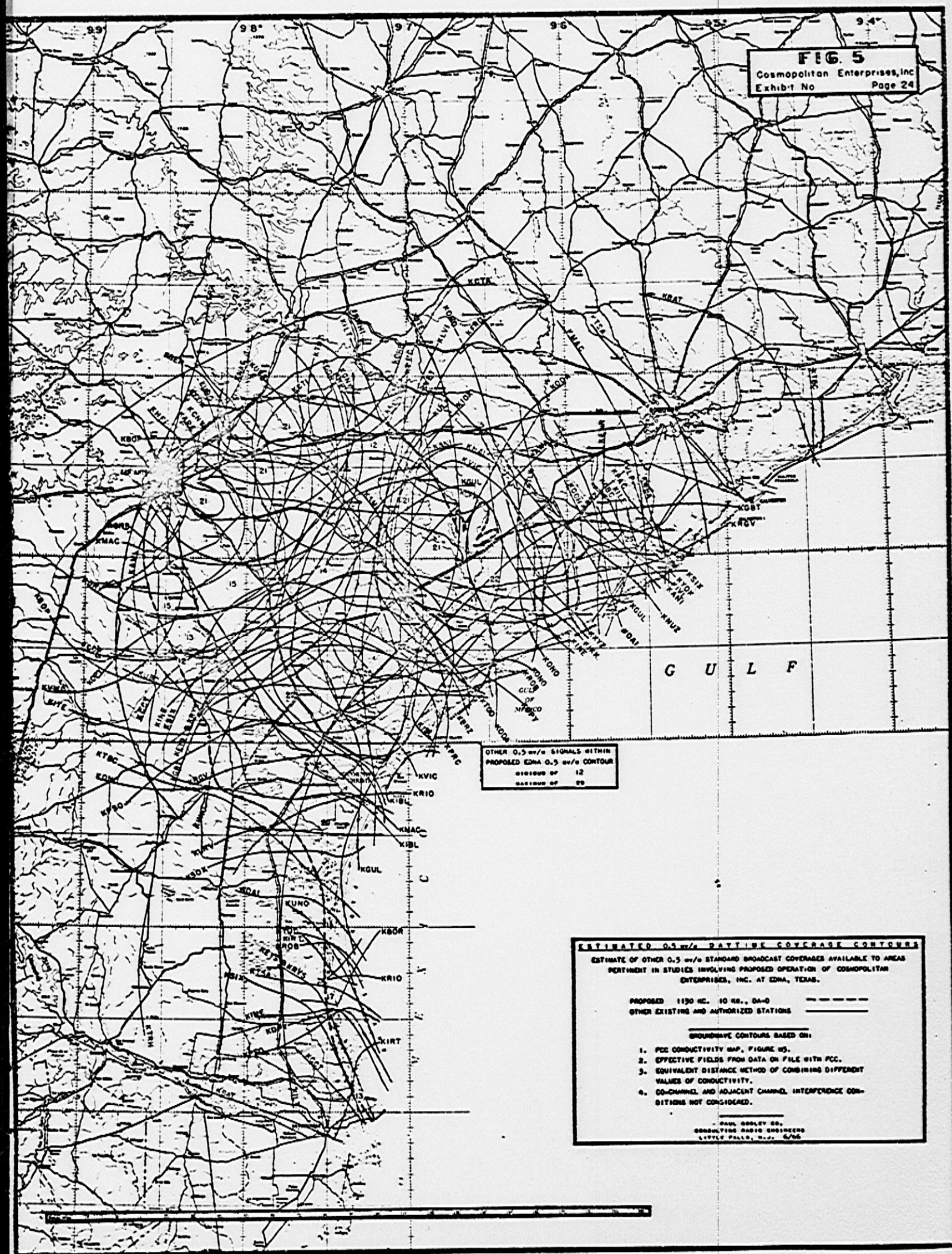
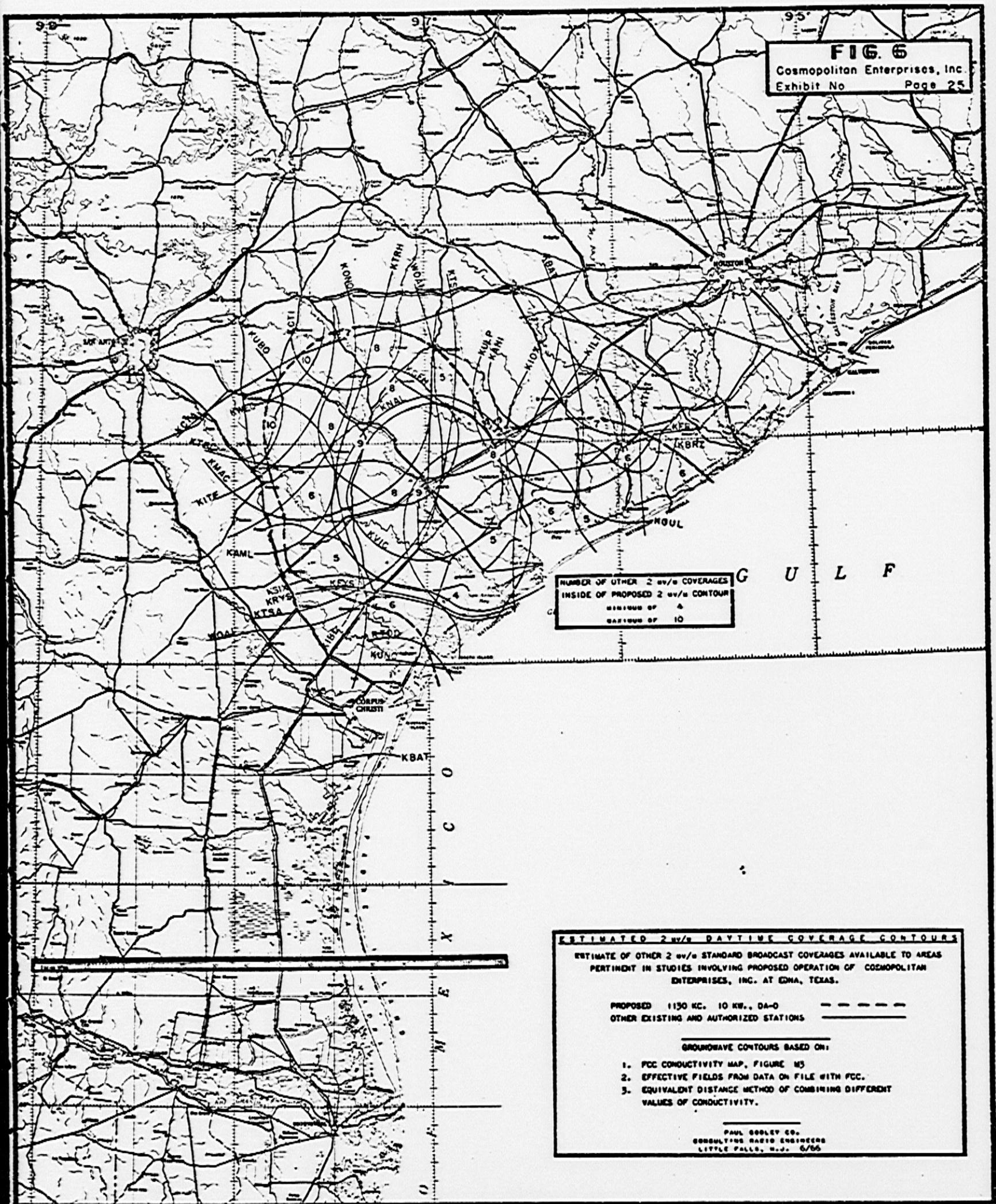


FIG. 4

Cosmopolitan Enterprises, Inc.
Exhibit No. Page 23







MILES FROM ANTENNA

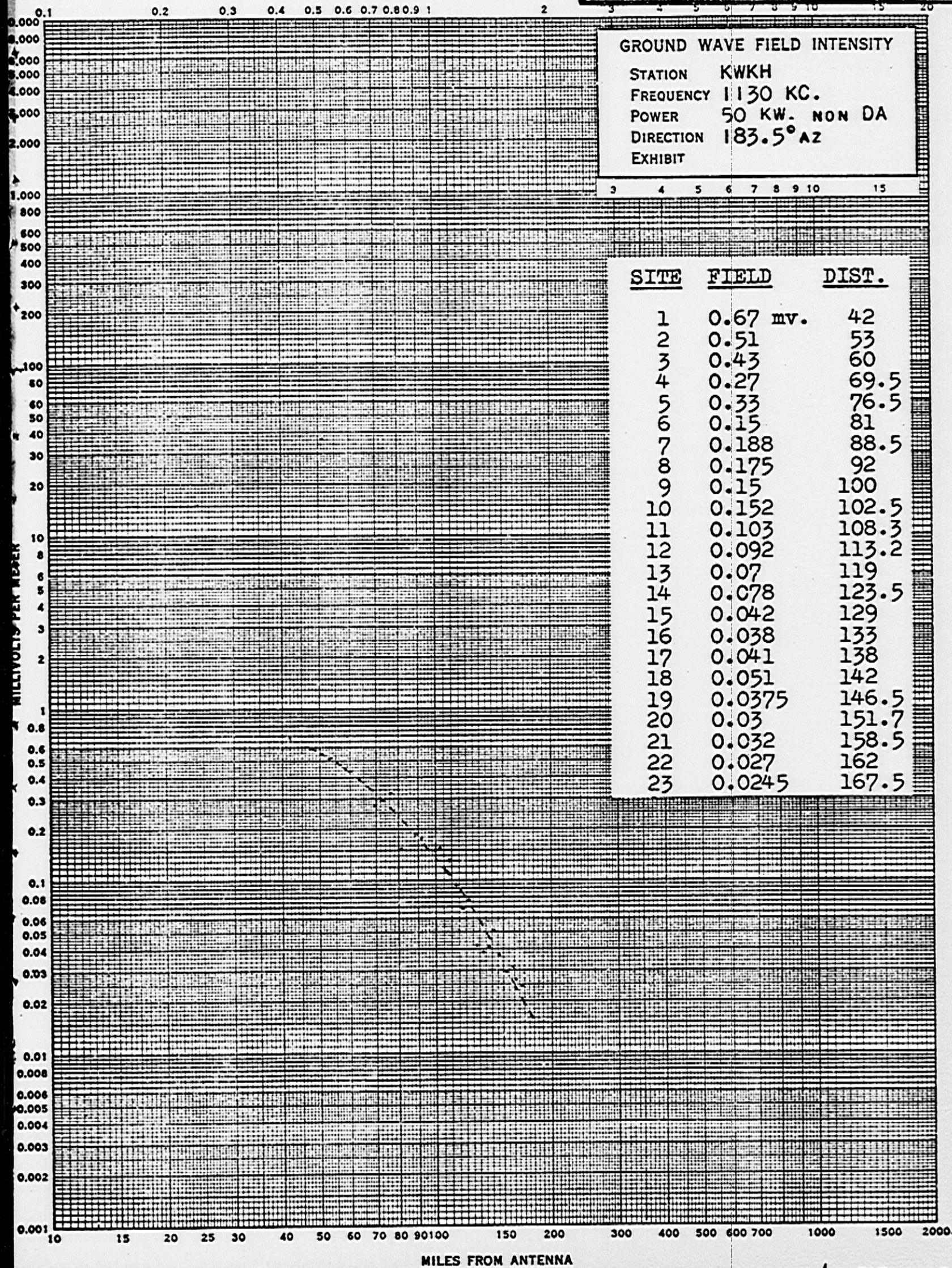


FIGURE 8
COSMOPOLITAN ENTERPRISES, INC.
EXHIBIT NO. PAGE 27

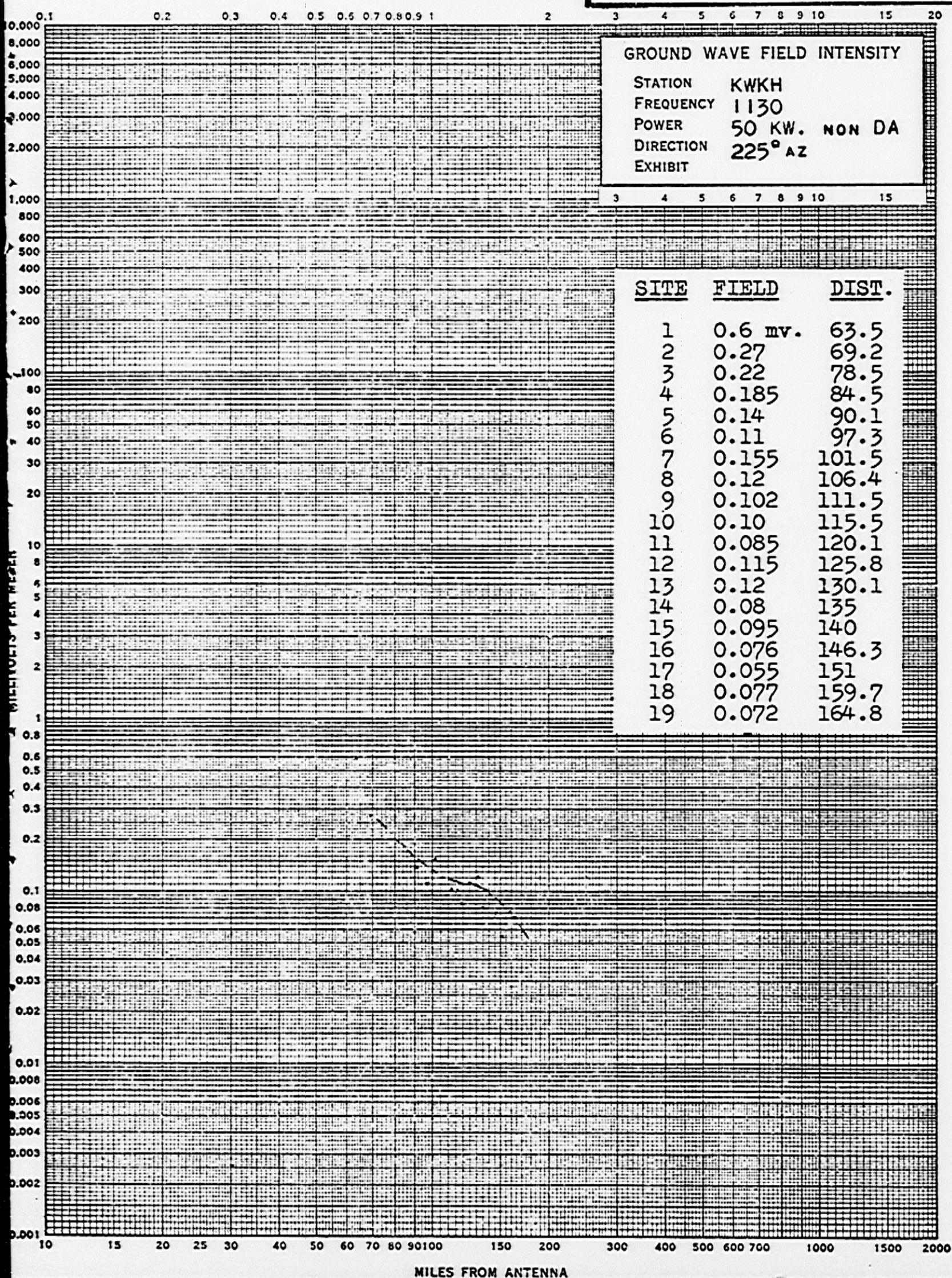


FIGURE 9

COSMOPOLITAN ENTERPRISES, INC.
EXHIBIT NO.

PAGE 28

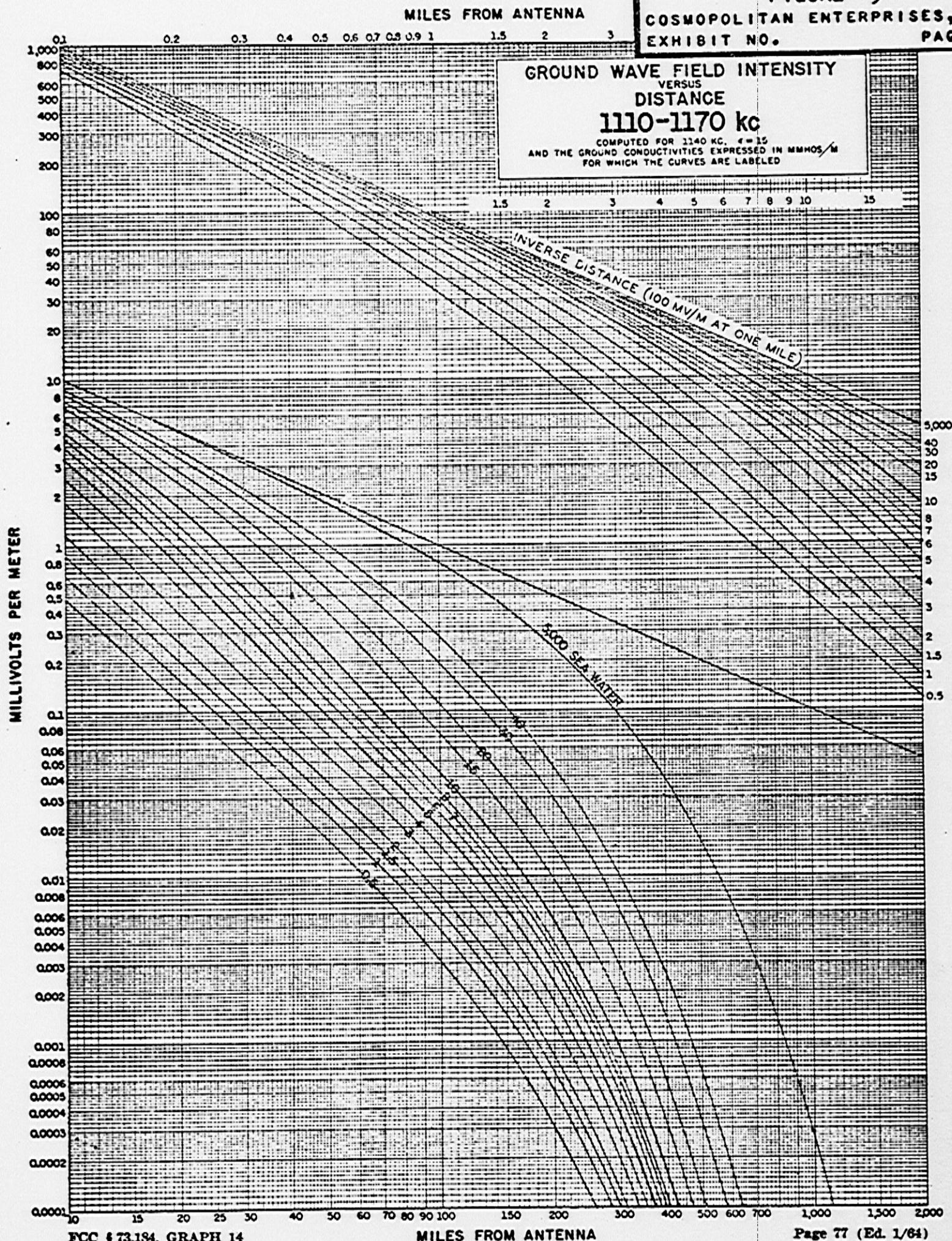


FIG 10
Cosmopolitan Enterprises Inc
Exhibit No. Page 29

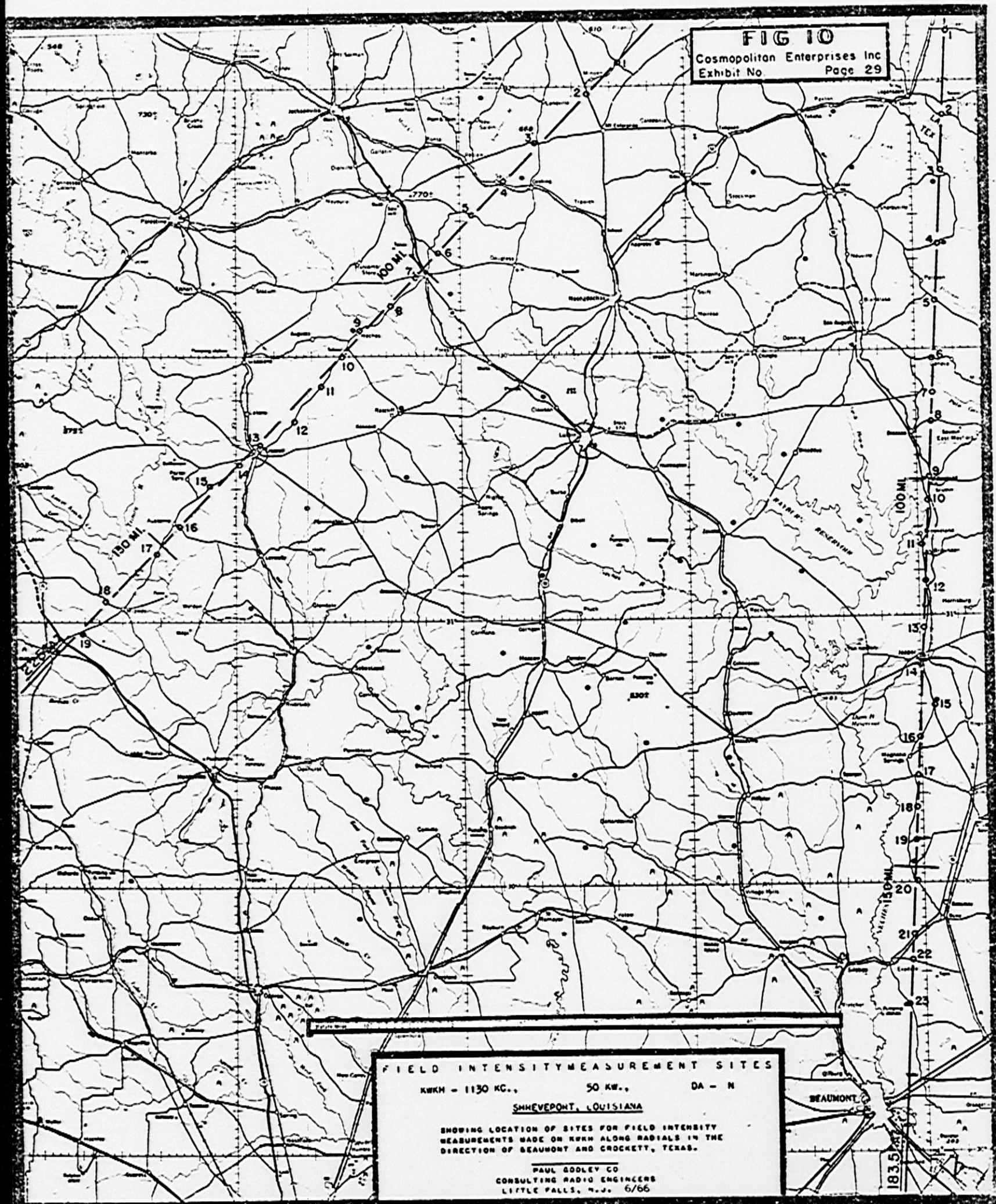


FIGURE 11
COSMOPOLITAN ENTERPRISES, INC.
EXHIBIT NO. 30

A. EARL CULLUM, JR.
CONSULTING RADIO ENGINEER
HIGHLAND PARK VILLAGE
DALLAS, TEXAS

RADIO STATION KWKH
1100 KC 50,000 WATTS
RADIAL NORTH 125 DEGREES EAST
MARCH 13, 1941

POINT	LINE	E	D
D 1	4:00 P.M.	0.94	31.0
D 2	3:35 P.M.	0.59	33.0
D 3	3:25 P.M.	5.45	40.0
D 4	3:10 P.M.	4.13	43.5
D 5	2:55 P.M.	3.41	50.0
D 6	2:45 P.M.	2.72	53.0
D 7	2:40 P.M.	1.43	55.8
D 8	2:35 P.M.	1.47	59.3
D 9	2:25 P.M.	1.12	65.1
D 10	2:10 P.M.	1.14	69.3
D 11	2:05 P.M.	0.944	72.3
D 12	1:55 P.M.	0.750	76.8
D 13	1:40 P.M.	0.737	82.0
D 14	1:30 P.M.	0.498	88.5
D 15	12:55 P.M.	0.519	95.5
D 16	12:45 P.M.	0.408	100.
D 17	12:35 P.M.	0.535	103.
D 18	12:25 P.M.	0.446	108.
D 19	12:15 P.M.	0.535	111.
D 20	12:10 P.M.	0.426	114.
D 21	12:05 P.M.	0.430	120.
D 22	12:00 P.M.	0.346	122.
D 23	11:15 A.M.	0.288	126.
D 24	10:45 A.M.	0.203	130.
D 25	10:40 A.M.	0.177	134.
D 26	10:30 A.M.	0.209	136.
D 27	2:50 A.M.	0.154	145.
D 28	2:15 A.M.	0.127	161.

ABOVE MEASUREMENTS MADE BY T. A. TINSLEY¹
USING RCA TAY-76-8 SERIAL 690

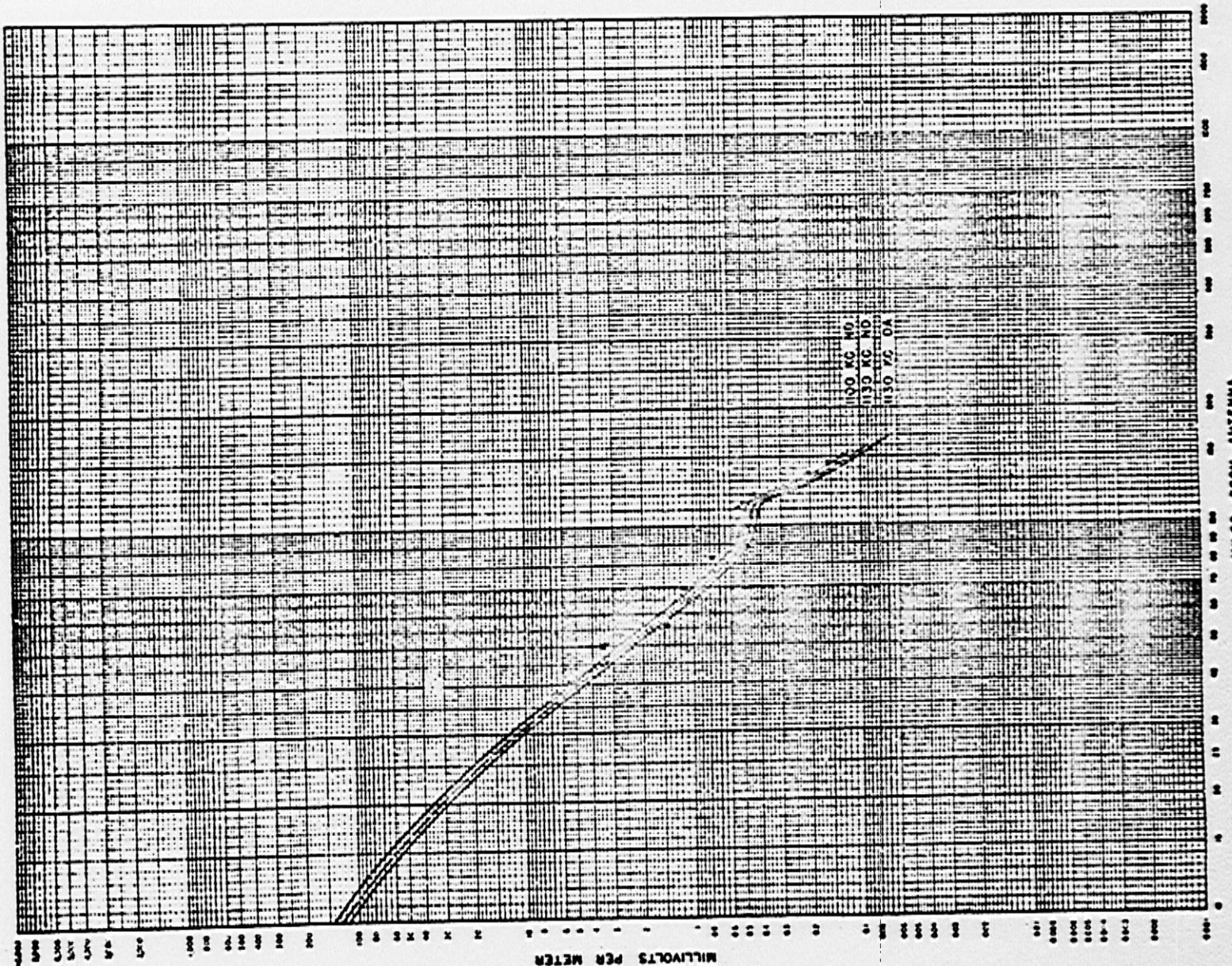


FIGURE 12
COSMOPOLITAN ENTERPRISES, INC.
EXHIBIT NO. 31

A. EARL CULLUM, JR.
CONSULTING RADIO ENGINEER
HIGHLAND PARK VILLAGE
DALLAS, TEXAS

RADIO STATION KNKH
1100 KC 60,000 WATTS
RADIAL NORTH 160 DEGREES EAST
FEBRUARY 17 AND 18th, 1941

Panel	Line	A	B	C	D	E	F	G
1	7-30 A.M.	43.3	20.6					
2	7-57 A.M.	23.9	12.5					
3	8-05 A.M.	22.3	24.0					
4	8-15 A.M.	12.7	27.7					
5	8-32 A.M.	16.6	30.8					
6	9-40 A.M.	14.5	33.0					
7	9-50 A.M.	7.97	35.3					
8	9-55 A.M.	6.49	38.5					
9	9-15 A.M.	6.43	41.4					
10	9-30 A.M.	4.36	46.4					
11	9-45 A.M.	3.34	40.9					
12	10-12 A.M.	2.07	55.5					
13	10-16 A.M.	2.93	57.6					
14	10-30 A.M.	1.28	62.6					
15	10-45 A.M.	1.07	65.0					
16	10-55 A.M.	1.27	63.0					
17	11-00 A.M.	0.912	71.2					
18	11-06 A.M.	0.339	74.6					
19	11-15 A.M.	0.912	77.5					
20	12-10 P.M.	0.446	86.5					
21	12-15 P.M.	0.414	91.3					
22	12-25 P.M.	0.387	104.					
23	1-00 P.M.	0.202	103.					
24	2-15 P.M.	0.203	115.					
25	2-30 P.M.	0.136	126.					
26	9-00 A.M.	0.196	138.					
27	9-10 A.M.	0.203	140.					
28	9-20 A.M.	0.100	145.					
29	9-35 A.M.	0.157	147.					
30	9-45 A.M.	0.044	151.					
31	10-05 A.M.	0.111	155.					
32	10-15 A.M.	0.124	160.					
33	10-30 A.M.	0.106	166.					
34	10-55 A.M.	0.103	171.					
35	11-05 A.M.	0.003	177.					
	11-35 A.M.	0.003	181.					

ABOVE MEASUREMENTS MADE BY T. A. THIESLE
USMC RCA TLW-76-B SERIAL 500

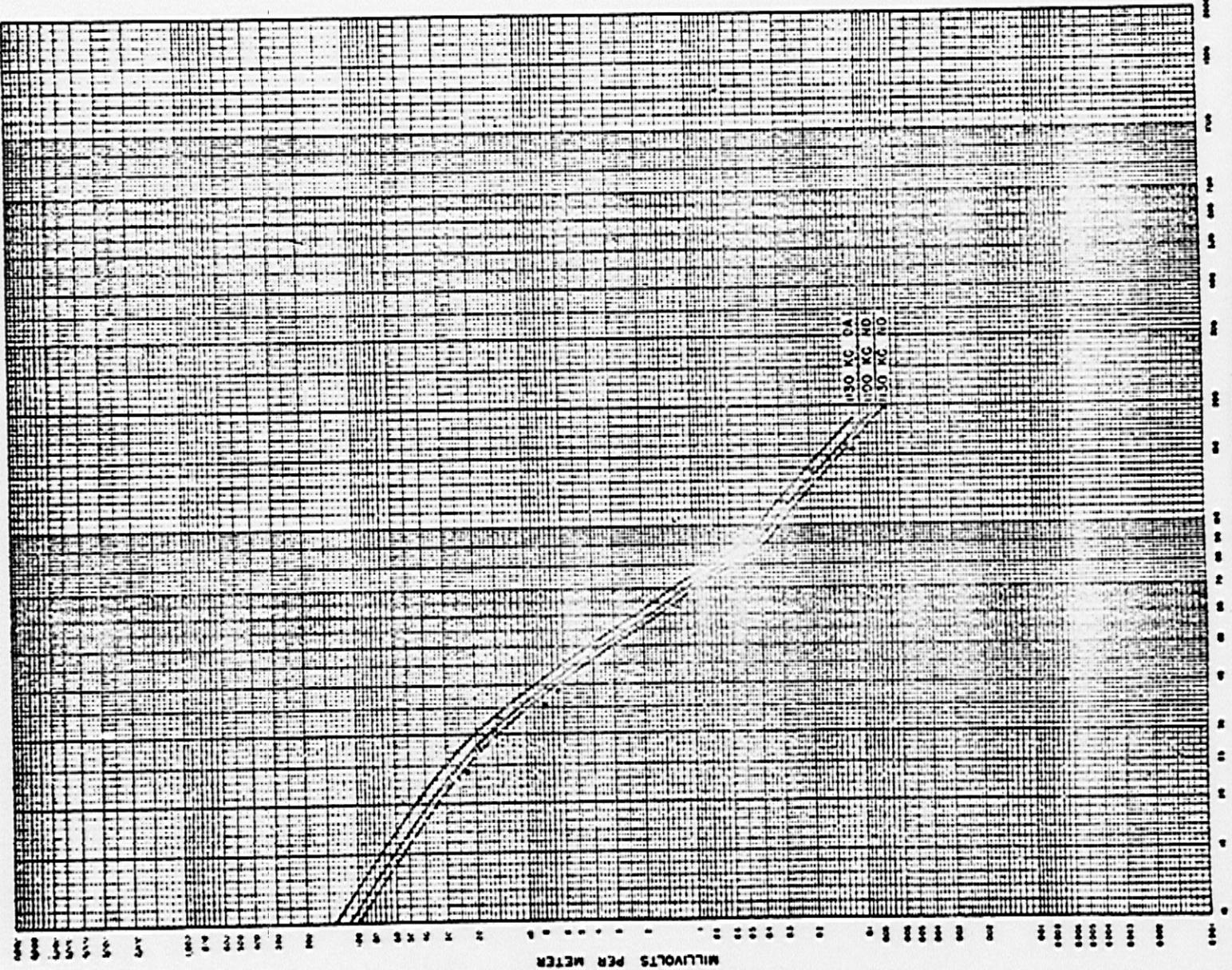


FIGURE 13
COSMOPOLITAN ENTERPRISES, INC.
EXHIBIT NO. 1
PAGE 32

A. EARL CULLUM, JR.
CONSULTING RADIO ENGINEER
HIGHLAND PARK VILLAGE
DALLAS, TEXAS

RADIO STATION KMKH
1100 KC 50,000 WATTS
RADIAL NORTH 200 DEGREES EAST
FEBRUARY 19 AND 20th, 1941

Point	Line	L	M	E	D
1	1.25 P.M.	18.0		25.5	
2	1.20 P.M.	15.7		27.5	
3	1.15 P.M.	16.1		29.6	
4	1.07 P.M.	10.2		32.0	
5	1.00 P.M.	9.81		35.5	
6	12.55 P.M.	7.02		38.8	
7	12.45 P.M.	5.44		40.6	
8	12.40 P.M.	3.97		42.0	
9	12.35 P.M.	3.22		44.0	
10	12.30 P.M.	3.94		45.7	
11	11.50 A.M.	2.60		43.5	
12	11.35 A.M.	2.69		63.0	
13	11.30 A.M.	2.43		55.2	
14	11.16 A.M.	2.10		53.5	
15	11.03 A.M.	2.00		62.3	
16	10.53 A.M.	2.07		62.0	
17	10.34 A.M.	1.90		66.5	
18	10.26 A.M.	1.28		71.0	
19	10.16 A.M.	0.721		73.0	
20	10.05 A.M.	0.679		79.6	
21	10.00 A.M.	0.656		81.5	
22	9.50 A.M.	0.629		82.5	
23	9.00 A.M.	0.537		87.5	
24	8.50 A.M.	0.524		89.0	
25	8.00 A.M.	0.367		102.	
26	3.00 P.M.	0.327		107.	
27	2.16 P.M.	0.163		121.	
28	2.00 P.M.	0.160		123.	
29	1.50 P.M.	0.147		130.	
30	1.25 P.M.	0.170		136.	
31	1.00 P.M.	0.156		142.	
32	1.00 A.M.	0.065		155.	
33	1.15 A.M.	0.080		169.	
34	1.00 A.M.	0.072		166.	
35	10:45 A.M.	0.035		172.	
36	10:25 A.M.	0.036		179.	

ABOVE MEASUREMENTS MADE BY T. A. TINSLEY
USING RCA TUV-76-B SERIAL 690

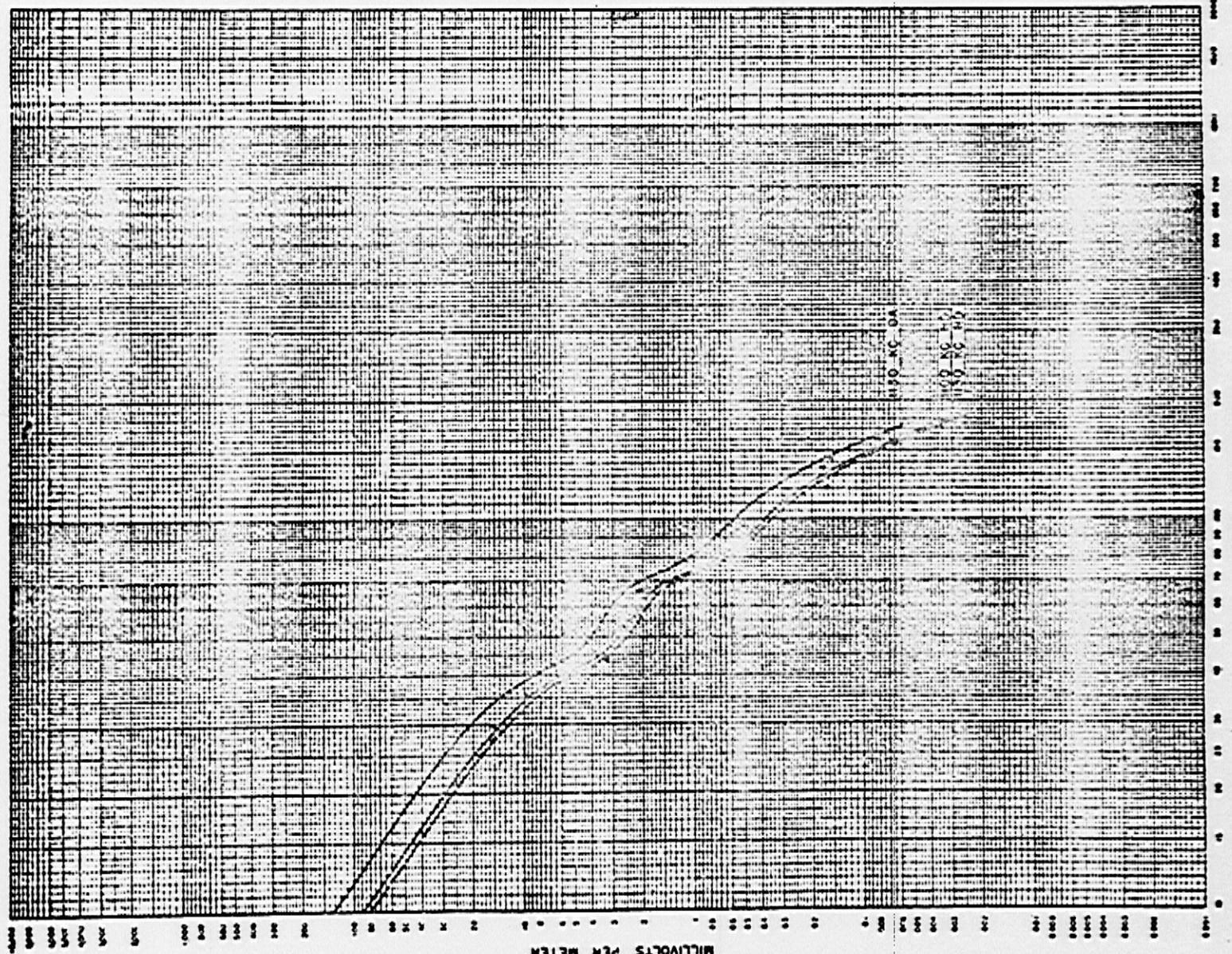


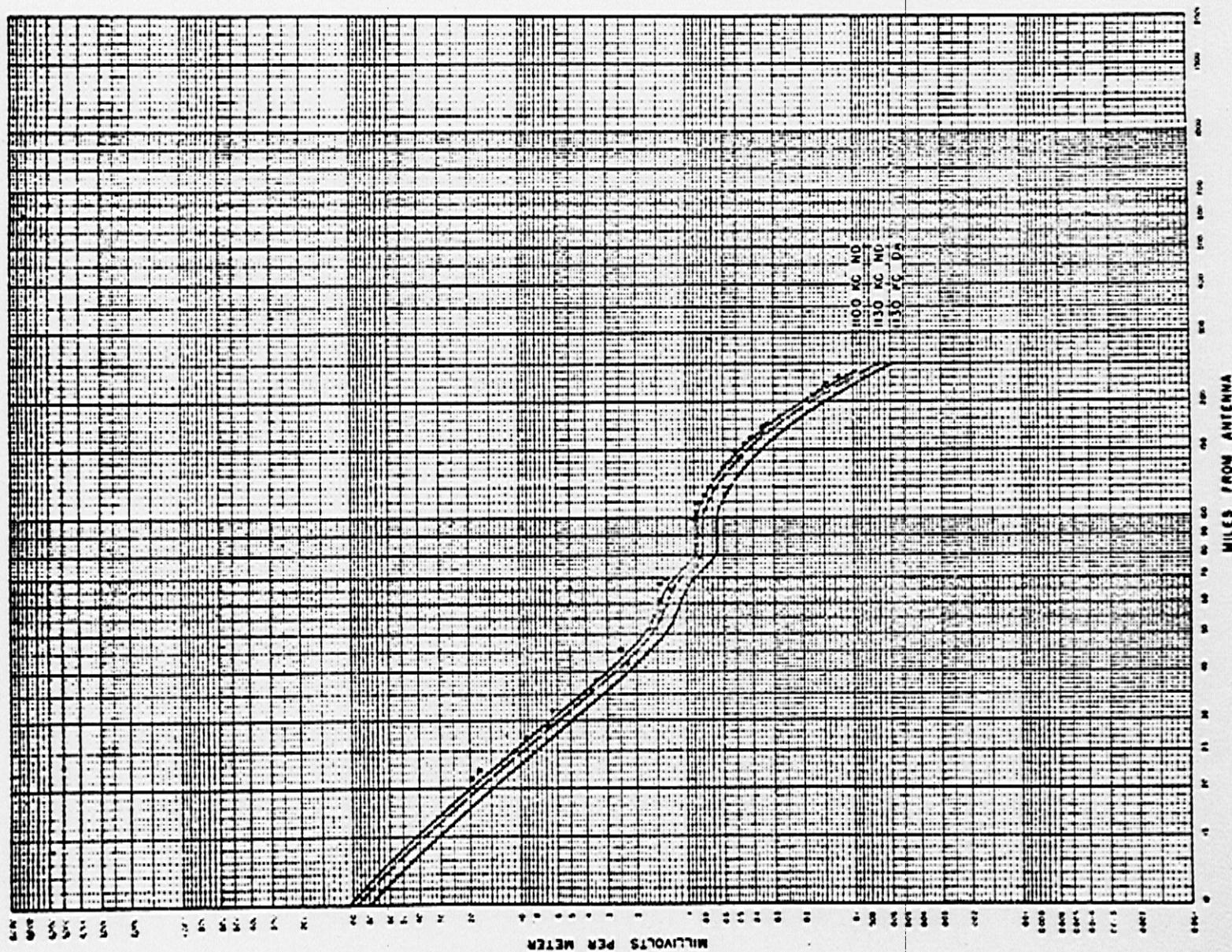
FIGURE 14
COSMOPOLITAN ENTERPRISES, INC.
EXHIBIT NO. PAGE 33

A. EARL CULLUM, JR.
CONSULTING RADIO ENGINEER
HIGHLAND PARK VILLAGE
DALLAS, TEXAS

RADIO STATION KWKH
1100 KC 50,000 WATTS
RADIAL NORTH 250 DEGREES EAST
FEBRUARY 4, 6, AND 6*, 1941

TIME	LINE			E
	D	C	B	
11:36 A.M.	24.0			
11:45 A.M.	22.1			
11:47 A.M.	19.7			
11:50 A.M.	18.6			
12:05 P.M.	9.50			
12:15 P.M.	9.50			
12:30 P.M.	8.72			
12:45 P.M.	8.50			
1:00 P.M.	8.36			
1:15 P.M.	5.24			
1:30 P.M.	5.00			
1:45 P.M.	5.00			
2:00 P.M.	5.00			
2:15 P.M.	5.00			
2:30 P.M.	5.00			
2:45 P.M.	5.00			
3:00 P.M.	5.00			
3:15 P.M.	5.00			
3:30 P.M.	5.00			
3:45 P.M.	5.00			
4:00 P.M.	5.00			
4:15 P.M.	5.00			
4:30 P.M.	5.00			
4:45 P.M.	5.00			
5:00 P.M.	5.00			
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5:30 P.M.	5.00			
5:45 P.M.	5.00			
6:00 P.M.	5.00			
6:15 P.M.	5.00			
6:30 P.M.	5.00			
6:45 P.M.	5.00			
7:00 P.M.	5.00			
7:15 P.M.	5.00			
7:30 P.M.	5.00			
7:45 P.M.	5.00			
8:00 P.M.	5.00			
8:15 P.M.	5.00			
8:30 P.M.	5.00			
8:45 P.M.	5.00			
9:00 P.M.	5.00			
9:15 P.M.	5.00			
9:30 P.M.	5.00			
9:45 P.M.	5.00			
10:00 P.M.	5.00			
10:15 P.M.	5.00			
10:30 P.M.	5.00			
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11:00 M.	5.00			
11:15 M.	5.00			
11:30 M.	5.00			
11:45 M.	5.00			
12:00 M.	5.			

FIGURE 15
COSMOPOLITAN ENTERPRISES, INC.
EXHIBIT NO. 4



A. EARL CULLUM, JR.
CONSULTING RADIO ENGINEER
HIGHLAND PARK VILLAGE
DALLAS, TEXAS

RADIO STATION KMKH
1100 KC 50,000 WATTS
RADIAL NORTH 285 DEGREES EAST
FEBRUARY 7 AND 8, 1941

Panel	Time	A	B	C	D	E
H 1	2:35 P.M.	19.5	21.2			
H 2	2:30 P.M.	17.4	22.3			
H 3	2:20 P.M.	16.7	25.0			
H 4	2:15 P.M.	9.18	27.0			
H 5	2:00 P.M.	6.69	29.0			
H 6	1:45 P.M.	6.43	31.6			
H 7	1:30 P.M.	3.74	36.0			
H 8	1:25 P.M.	3.48	38.0			
H 9	1:15 P.M.	2.28	42.2			
H 10	1:00 P.M.	2.40	45.8			
H 11	1:33 P.M.	1.68	51.4			
H 12	1:08 P.M.	1.44	57.3			
H 13	1:50 A.M.	1.44	61.8			
H 14	1:00 A.M.	1.23	65.0			
H 15	1:45 A.M.	1.44	67.4			
H 16	1:35 A.M.	1.31	69.6			
H 17	1:16 A.M.	0.044	73.0			
H 18	10:05 A.M.	0.878	76.3			
H 19	9:50 A.M.	0.878	80.0			
H 20	9:16 A.M.	0.852	90.0			
H 21	9:05 A.M.	0.898	94.0			
H 22	8:55 A.M.	0.918	99.0			
H 23	8:35 A.M.	0.865	103.0			
H 24	8:10 A.M.	0.852	109.0			
H 25	7:50 A.M.	0.787	114.0			
H 26	4:20 P.M.	0.634	130.0			
H 27	4:08 P.M.	0.603	135.0			
H 28	3:50 P.M.	0.551	139.0			
H 29	3:35 P.M.	0.472	144.0			
H 30	3:12 P.M.	0.511	149.0			
H 31	2:50 P.M.	0.446	156.0			
H 32	2:30 P.M.	0.406	161.0			
H 33	2:06 P.M.	0.348	166.0			
H 34	1:37 P.M.	0.354	172.0			
H 35	1:30 P.M.	0.328	175.0			
H 36	12:45 P.M.	0.275	184.0			
H 37	9:20 A.M.	0.160	213.0			
H 38	9:30 A.M.	0.147	221.0			
H 39	10:10 A.M.	0.111	231.0			
H 40	10:40 A.M.	0.085	235.0			
H 41	10:50 A.M.	0.121	231.0			
H 42	10:05 A.M.	0.108	225.0			
H 43	11:20 A.M.	0.152	216.0			
H 44	11:35 A.M.	0.170	209.0			

ABOVE MEASUREMENTS MADE BY T. A. TINSLEY
USING RCA TUY-5-B SERIAL 680

TABULATION OF

ADJUSTMENT AND MAINTENANCE TOLERANCES

Azimuth	Field (mv/m)	MEOV	Assumed End Tower Variations (Field variations shown in percent, phase in degrees)							
			+ .75%	- .75%	+1°	-1°	+ 1/2% + 1/2°	+ 1/2% - 1/2°	- 1/2% + 1/2°	- 1/2% - 1/2°
341°	45°	39.7	48.5	36.5	42.9	36.1	43.4	31.	40.	39.4
346	40	12.7	17.0	9.3	16.2	10.3	1.3	9.3	13.8	11.7
351	35	2.4	11.9	6.0	10.8	3.7	1.0	5.4	0.8	4.1
356	30	8.1	12.2	11.7	4.6	8.4	7.8	10.6	5.9	10.3
1	25	7.3	11.4	10.9	3.8	6.7	7.9	9.4	4.7	10.0
6	20	2.7	9.5	6.3	0.9	1.3	3.9	4.4	0.3	0.6
11	15	3.6	10.7	1.4	7.1	5.6	1.8	2.1	6.9	0.4
16	10	9.4	13.5	6.0	12.9	11.7	7.2	8.3	12.8	6.0
21	5	13.5	17.0	10.0	16.9	16.1	11.0	12.5	16.9	10.0
26	0	15.0	20.0	11.6	18.4	17.6	12.5	14.1	18.6	4.4
31	5	13.5	20.0	10.6	16.9	16.1	11.0	12.5	16.9	10.0
36	10	9.4	17.5	6.0	12.9	11.7	7.2	8.3	12.8	6.0
41	15	3.6	15.5	1.4	7.1	5.6	1.8	2.1	6.9	0.4
46	20	2.7	15.0	6.3	0.9	1.3	3.9	4.4	0.3	0.6
51	25	7.3	18.2	10.9	3.8	6.7	7.9	9.4	4.7	10.0
56	30	8.1	20.5	11.7	4.6	8.4	7.8	10.6	5.9	10.3
61	35	2.4	20.7	6.0	10.8	3.7	1.0	5.4	0.8	4.1
66	40	12.7	19.0	9.3	16.2	10.3	1.3	9.3	13.8	11.7
71	45	39.7	50.0	36.5	42.9	36.1	43.4	31.0	40.0	39.4

Note: Adjustment field is computed from current and phase parameters which will be utilized to facilitate the adjustment procedures.

